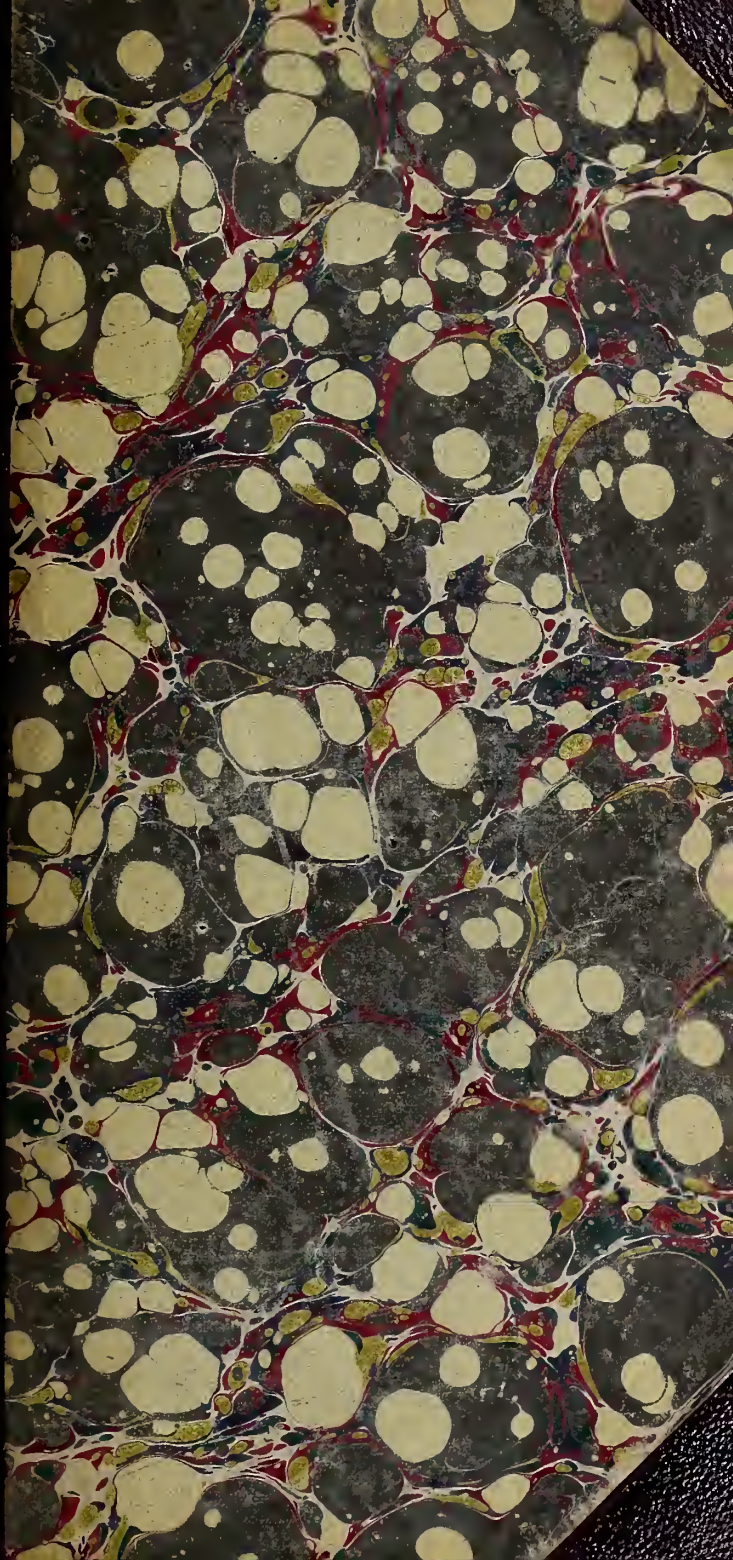

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Journal of the Asiatic
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JOURNAL

OF THE

ASIATIC SOCIETY OF BENGAL,

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"It will flourish, if naturalists, chemists, antiquaries, philologers, and men of science, in different parts of *Asia* will commit their observations to writing, and send them to the Asiatic Society at Calcutta. It will languish if such communications shall be long intermitted; and it will die away if they shall entirely cease."—Sir Wm. Jones.

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JOURNAL

OF THE

ASIATIC SOCIETY.

JANUARY, 1850.

Some conjectures on the progress of the Bráhminical Conquerors of India. By HENRY TORRENS, *B. A., V. P. and late Secy. As. Soc. of Bengal.*

IN the grave pages of a scientific journal, so often honoured by the successes of positive antiquarian discovery, it may seem at first sight, somewhat idle to obtrude conjectural speculation, or something nigh akin to it. Where, however, he who dares to conjecture, does not go the length of insistance upon the verity of his suggestions; but is willing to incur the discredit of failure in his position, for the chance of having been able to open a new road to enquiry, the boldness of the attempt may perhaps justify its publication, however faint the hope of any ultimate solid advantage.

But in truth it will be I think, found, that the progress of discovery up to this time in that anomalous field of Indian antiquity in which neither legible monument, nor written record lend their assistance to the student, has hitherto depended a good deal upon happy supposition, directing the course of subsequent enquiry, leading to a definite consequence: as in the Indo-arian researches, we see the suggestion and first discovery with Prinsep, the investigation with Lassen, the result deduced by Wilson. I think, and have for some years thought, that we stand on the margin of a still broader field of historic knowledge, such as shall carry us from studying the mere despotic successions of princes, to an accurate acquaintance with the progress of peoples, and an approximation in due course to the solution of that great mystery, the dispersion and subdivision of the races of mankind. The

differences and yet the co-existant affinities of those races constitute one of the strangest, and most interesting subjects of human study. Identity exists among them, in the radical formation of language, with a total variance of custom; while in another case, custom and apparent habits are identical, with a difference of the very system of speech, irreconcileable as yet by any current theories in philology. The most striking of these instances, is perhaps, that of the ancient Egyptians, and the modern Hindoos, whose affinity of customs is indisputable, even to the institution of castes, and segregation; whose distinctive dress is precisely similar;—whose symbolic representations of deities in many instances correspond wonderfully; and who indeed to any one that looks observingly on the memorials of the extinct nation, while residing among the extant one, present in their modes and habits of life, of labour,—the shape of tools, boats, and utensils, and a hundred minutiæ of fact speaking to the eye, but tedious and trifling to detail, the appearance of one people. But if between two races that reckon the periods of their substantive existence, not by centuries but by milliads, there still abide in the one that lives, after the contingent influences of so many revolutions, so striking a resemblance to that one which nationally exists no more how much greater must not that similarity have been in times when both flourished, powerful and independent, at a period long anterior to the records of written history, in contemporaneous greatness? Now if on the one hand, the Egyptian hath left us (save in the *papyri* the examination of which is in its infancy) no historical record of himself beyond what lie in temples and in tombs, with their remains of art, their pictures, and their half-read hieroglyphics,—so on the other does the Hindoo, with an extant literature, vouchsafe us little or nothing of the definitely historical, amid much acute philosophy, much gorgeous poetry, mystical and imaginative theology, and legislation of a singular wisdom, fitted only for a highly civilized people. But, on either hand, meagre though to the historical interest of the lists of Egyptian kings, and all apocryphal the romance of Hindoo heroic poetry, we have fortunately preserved with each the representation of a people, whom chronology helps us in setting juxta-posed in the zenith of their power at corresponding periods. If then after a lapse, say, of two thousand years, the one race still be similar to that other which exists no more, while its records of things done anterior to that time, prove usages and

habits, almost identical with those that constituted the painted records of the extinct people,—we may with justice speculate upon an earlier time that saw the common origin of both.

It was in making some cursory enquiry into the early military history of nations, that I gradually accustomed my mind to admit the possible truth of a speculation, which I had inclined towards some years previously, regarding the eastern tributaries (recognizable as such by the animals and offerings they bring) represented in the Egyptian kings' tombs of the eighteenth dynasty.* The early mythic fable of the Indian expedition of the Egyptian Bacchus; the history of Rama† with its Bacchic character which so struck Bishop Heber, when first he saw it represented in action,‡—the visible affinities of custom, the similarity of religious types, the painted caves rivalling the graphic picture-records of Egypt,—all stimulate a dweller in India, at all interested in searching for the material of history, to approximate to some idea of the point of annexation, at which the Egyptian and the Indian element in it give evidence of union. But it has been exceedingly difficult to devise up to this time the direction, in which that possibility of union is to be looked for. The opinion that "there is no other people of the ancient world whose form and fashion bear so strongly the impress of locality as the Egyptian; or who is bound to his country by so many ties, or who so identified it with himself,"§—was all which had distributed itself very largely: its learned and sagacious propounder maintained as late as the year 1826|| that the dominant Egyptian castes, were descended from an aboriginal African people, with a curious disregard of the internal evidence of their institution as pointing to a different origin: and the idea of a maritime intercourse with India, founded on the known facts as to the external commerce

* Wilkinson's Manners and Customs, Vol. I. *in loc.*

† An old Egyptian word. "*Pyramid* is according to him (Ignazio di Rossi) PERAM, 'the high.' The root *ram* for high, similar with the Semitic, is assured; *rama* for high seems also to have warrant. The pronounciation of the article is as with the *pi-rômis* of Herodotus for *pe-rômi*, the man." Bunsen's Ægypt's Place. Book II. Sec. VI. (a note is appended to this in the original with a cloud of philological authorities).—H. T.

‡ Heber's Journal *in loc.*

§ Heeren's Researches, Vol. V. ch. 1.

|| Bunsen's Egypt's Place. B. I. Sect. III. B. VII.

of Egypt, and her ancient ports, as Philoteras (Wilkinson's M. and C. ch. III.) might, in this sense account for the Hindu analogies; nay, the passage* in George Syncellus upon the 40th king in his list, Amenophthis ("who is the Vocal Stone. *The Æthiopians came from the Indus, and settled in Egypt;")* would go with many who adopted Heeren's view as proof positive, in the absence of a thoroughly critical examination of the records, historical, traditional, and chronological, of the ancient kingdoms of Egypt.

It so happened that in 1846, a position was put forth in a treatise on military history, published anonymously and obscurely enough by me in Calcutta, maintaining the Egyptians, to have been the original instructors and civilizers of Europe. This idea combated the view taken of them as respects the peculiar "impress of their locality," and was entertained after mature reflection upon consideration that their monuments show them to have been great and mighty conquerors, that they also bore testimony to their progress in art and science, and that art goes forth with arms, the study of which is one of the first historical characteristics with an energetic and enterprising people. After quoting Saxe's† well-known comment on discipline, it was observed —"the nations of antiquity who derived their military system directly from Egypt, imbibed this great principle together with the rules of practice which their leaders, or their founders carried away from the land, which was truly the focus of all western civilization. These

* "I have represented the Egyptians as an aboriginal people of Africa, and as descended from the same race as the present inhabitants of Nubia. This race insensibly spread itself by colonies along the valley of the Nile into Lower Egypt. I have confined this assertion, however, to the superior castes of priests and warriors; since it appears, according to the relations of the Egyptians themselves, that it was a sacerdotal caste, emigrated from Meroë, which, by the aid of its religion and superior intelligence, founded a dominion over the Nomad tribes, the primitive inhabitants of Egypt. Such is also the opinion of Rosellini, although he does not mention Meroë, but only cites the generic name of Ethiopia. I shall show, a little further on, that Champollion also held the same opinion, which is still further strengthened by the statements of other travellers quoted in my work." Heeren's Res. Vol. V. Appendix XI. Sec. I.

† The statements of this Byzantine chronologer, with those of his predecessors Theophilus, Panodorus, and Anianus, are critically examined by Bunsen in his "Egypt's Place." B. I. Sec. II. D. E. F. G.—H. T.

nations were the Phœnicians; and through them the Carthaginians; the Hebrews; the Greeks generally; the Etruscans and through them the Romans. As to other nations more ancient than these, who may indirectly have either participated with the Egyptians in their knowledge of the science of war, or have gained experience of it by subsequent collision with them, we shall have hereafter a few brief words to say, more however in the way of speculation than enquiry."

To this position was added, another elicited in the course of an investigation, into the history of the use of the horse, an animal of eastern origin as now acknowledged by all naturalists; the antiquity of the use of this creature in Arabia was established,* *chronologically*, by the dates (2337 and 2136 B. C.) given on astronomical calculation to the book of Job; and *historically*, at a period perhaps anterior to any extant conventional base for calculation, by reference to the Hymarite rock inscriptions, found in the old seats of the tribe of Aws in Hadramaut by Lieut. Welsted (A. D. 1843), and translated by the Rev. C. Forster.† Now as Wilkinson, "the trustworthy and accurate," as Chevalier Bunsen calls him, gave for the era of the first Egyptian king, no more than 2320 B. C., the question of comparative civilization at the period in Egypt and Arabia struck me as worth attention. On the one hand was an astronomical date assignable to the era of a people (of Uz), who had already a literature, and a knowledge, however patriarchal, of the arts;—and beside it, an historical record of unknown antiquity, descriptive of the private life and military habits of a race, greatly advanced in the luxuries of the one, and the experience of the other. On the contrary it was set, on the authority of Josephus,‡ a date for the existence of the oldest known founder of Egyptian civilization, posterior to that of Job. Without skill, or opportunity in this country, to examine further, I could only judge inferentially from the facts before me, and, in showing the futility of Col. Hamilton Smith's position that the *Hyksos*, or shepherd kings, brought the horse to the Egyptians, who bestowed the knowledge of him on the Arabians, I observed as follows:—

* Reveries, B. VII.

† Forster's Geography of Arabia, Vol. II.

The argument is appended, or written, without amendment of the dates.—H. T.

‡ Wilkinson, M. L. C. Vol. I. ch. II.

"If such communications existed between the two nations, how comes it that the camel, the national type-animal of Arabia, should never have found his way, into the painted records of the Egyptians, that careful and observant people? It is a most singular fact, that the camel never has yet been found pourtrayed upon any of the paintings or sculptures, extant in the Nile valley.* The native habitat of the horse was in high latitudes, thousands of miles distant from the spot in which he most appears to have been cultured: the indigenous site of the camel was in the sandy wastes of the children of Ishmael, immediately adjoining the land of Egypt. Yet are its inhabitants supposed to have transmitted the equine animal to the masters of the camel, and with all their curiosity, science and observation to have asked for, or admitted of, no return in kind? We can only conclude that the horse was brought by the original colonists of the Nile valley, a race so singularly coincident in customs and practices with the Hindus, from Central Asia, at a period beyond our power to calculate upon any date now in our possession; that another tribe or race must, about the same time, have carried the same animal into Arabia, where the nature of the country suggested, as in the case of Egypt, the manner of his use, and the purposes to which he should be applied. The one people, amid wide and open plains, and scanty pastures, rode, as became a nomad race; the other, in a low, narrow, deep, and plenteous land, pampered their steeds in stables, and yoked them to a car, a vehicle so light that two powerful horses could easily drag themselves and it, through the fat loan of the muddy country in which a mounted man would sink to his horse's locks at every stride."

It was not till about two years or more after the above was written that I received, in the German, the three first books of Chevalier Bunsen's Egypt's Place in the World's History; and it may be judged with what satisfaction I read the peroration of his first book, in which he italicises the one great result of his unparalleled research, coincident with my own humble inference.

"On a comparative view, we can have no hesitation in saying, that the investigation into mythology, as far as it has gone, determines upon a fact not less important as respects the world's history, as certainly

* Gibbon (Misc. Works) quotes Diodorus Siculus 6. III. c. 44 to prove that the camel was extant in his day as a wild animal in Arabia.—H. T.

and to the same intent, as did the dissection of (Coptic) philology. *The knowledge of God like the knowledge of language among the Egyptians has its roots in ancient Asia, in the ancient Armeno-Caucasian territory.* That this land, defined more nearly, is one of primitive Aram, and connected with the primitive kingdom in Babel,—and that the hieroglyphics of Egypt are actually nought else in the image of the world's history, than a still extant peculiarity of the old-time of Aramite-Armenian mankind (according with the same law whereby Iceland exhibits the still extant heathen Norway of the 8th century) —is an historical fact which we will here but assert, proposing to lay the proof of it before our readers in the fourth and fifth book.

"If we turn from this point to its opposite, the historical period of Egypt, our investigation into the Egyptic origines, will already have made it clear, that the kingdom of Menes itself, rests upon a venerable substructure of several centuries of the Nile valley, rich with the spirit of intellect. Conformably with it must Menes have constituted the kingdom of Egypt, in that he brought together, and united the separate elements of life of Egypt's provinces. Thus do these origins establish true, the assertion made at the opening of this book, that Menes created the historical knowledge of the Egyptians, as did Karlmagne that of the German peoples."*

Here then we have research supporting inference with such commanding weight of authority, as to encourage the resumption of ideas still more daring, than those even which suggested an eastern origin to the inhabitants of ancient Egypt, from a stock allied to the Hindu. I have not the fourth and fifth books of Chev. Bunsen's work, indeed I know not if they be published, in spite of enquiry made; but, I do not think it inexpedient to set forth once again, and, on authority corroborative of the Egyptian tomb-records, that the ancient Egyptians, an eastern people who brought into the Nile-valley the germ of civilization,—

* I have seen, and indeed possess, a translation of the first Vol. of Chev. Bunsen's Egypt by Charles Cottrell, Esq. M. A. (London 1848); but it is in a style of periphrasis, and not without omissions: I have therefore ventured on the humble verity of as literal a rendering as I could master. Should Mr. Cottrell have translated from a later edition than that of my copy (Hamburgh, 1845, octavo), which has suffered alteration, (and from the variations I should suppose so) part of my remarks do not apply.—H. T.

there perfected it, and then carried back their arms and arts as conquerors, both before and after their temporary subjection by the *Hyksos*, into the countries immediately civilized and peopled, through which they had, as nomads, passed on their way to the Nile.

It is remarkable that up to the time of the Ptolemies, the character of every monument, and of every vestige of the ancient Egyptian people retains its Egyptian type, that 'impress of locality' which so much struck Heeren; and as this type has from the earliest, been unmixed by analogy with that of any other nation, save the Hindu, the necessary conclusion is that the Egyptians in their migration towards the Nile traversed virgin lands, as yet unsettled and uninhabited. According to the great law which seems to regulate the progress of people from land to land, that progression is impulsive, the foremost tribe being forced forward by that which directly infringes upon it. This may happen in three ways;—by the strong hand, driving a race of previous settlers from their homes to the masterful advantage of the aggressor, who has perhaps himself been forced upon them;—or by the two supposed cases of incompatibility of co-existence in races whose capacities for accepting civilization materially differ; viz. either when the foremost race being of peaceful habits, industrious and quiescent, becomes dissatified with the neighbourhood of a people, which, though not unfriendly, is inapt to mix or to deal with its denizens on equal terms;—or where the converse occurs, the foremost nation being slothful, inert, uninventive, and capable of only a semi-savage independence, refusing and ultimately withdrawing from the offence of the civilization superincumbent over it, in the institutions of the nation that has immediately followed it up.* It is probable then that the shepherds, i. e. the Nomad races, had been "an abomination unto the Egyptians" from times anterior to their settlement in the Nile-valley,—at a period how remote the newly-established chrono-

* The disappearance of the pure Celtic races, in our isles before Saxon influences is a melancholy extant example of this latter phenomenon in the history of mankind: in process of centuries, the pure Celt recedes, while the Saxon or Teuton advances, and the mixed race formed intermediately remains stationary. The recession and gradual extinction of aboriginal American, Australian, and some South-African races before a mixed Saxo-Teutonic,—and as respects the Spaniard, a mixed Goto-Semitic race, offer analogous examples with variation of circumstances according to relative grades of civilization.—H. T.

logy of Chev. Bunsen shall, before I go much further, testify: but in the mean time I must go back to the vestiges which remain to us of one of those great races after their settlement as a civilized people, in order to trace the character of Egyptian influence over them.

I may here premise, that when writing on this subject in 1846, I alluded to the researches of Signor Botta (commenced in 1843) at Khorsabad, pointing out their immense importance, and stating that "we may look to receive from this quarter information of the most interesting and instructive character, as soon as the exploration of these ruins shall have been undertaken on an extensive scale. It may readily be conceived, that at such a time as this, vague speculation upon the character of the former tenants of these ancient realms, "would not only be valueless but even impertinent;" and Layard's Nineveh that now (1849) is before me, speaks confirmation, welcome and eloquent, of the justice of the opinion. This able man and delightful writer, who has driven by sheer sense, skill, and enterprise a new adit into the dark hill of history, has furnished us in one of his discoveries, with evidence of the adoption of Egyptian habits, and of the existence of an Egyptianised race in works of art (ivory carved figures with hieroglyphics and symbols of Egyptian sovereignty found at Nimroud) having in form and style of art a purely Egyptian character, though certain peculiarities would seem to mark the work of a foreign, perhaps an Assyrian artist;* the like were found at Kyomjik, another of the mighty mounds

* It is most interesting to compare in Mr. Dennis' Cities and Cemeteries of Etruria (2 Vols. 8vo. London, 1848), an archæological discovery of precisely similar character, simultaneously published with the Ninevehan one, as regards Egyptian imitative art, occurring in a very ancient Etruscan sepulchre at Vulci. This tomb, called by the discoverers *Grotto d' Iside* (Cit. and Cem. Vol. 1st. p. 419) is the burial place of two ladies of rank, "whose effigies are still in existence, though nearly three thousand years may have elapsed since their decease." Of the articles, vases, unguent-pots, and *alabastra*, in the tomb, "all have a strong Egyptian or oriental character; but with the exception of those evidently imported from the banks of the Nile, they are Etruscan imitations of Egyptian art, with the native stamp more or less strongly marked." Of a particular vase, Mr. Dennis further observes—"So Egyptian-like are the chariots, and the procession of females, painted on this vase that the general observer would take it for an importation: yet the learned have pronounced it Egyptian only in character, and native in execution, though of most archaic style, and early date." A necropolis of the

of ruins. But at Nimroud, a still stranger revelation was at hand. At a certain level in the mound, many tombs were found (Nineveh, vol. II. ch. XI.) containing the remains of the dead with vases, plates, mirrors, spoons, beads, and ornaments, "identical with similar remains found in the tombs of Egypt." Some of these tombs were built of baked bricks carefully joined, but without mortar; others were formed by large earthen sarcophagi covered with an entire alabaster slab. "Having carefully collected the contents of the tombs," says Mr. Layard, "I removed them, and dug deeper into the mound. I was surprised to find, about *five feet beneath them*, the remains of a building. Walls of unbaked bricks could still be traced; but the slabs with which they had been cased, were no longer in their places, being scattered about without order, and lying mostly with their faces on the flooring of baked bricks. Upon them were both sculptures and inscriptions." Here were the tombs *over* the ruins. The edifice had perished and in the earth and rubbish accumulating above its remains, a people, whose funeral vases, and ornaments were identical in form and material, with those found in the catacombs of Egypt, had buried their dead. "What race then occupied the country after the destruction of the Assyrian palaces? at what period were these tombs made?" asks Mr. Layard. He goes on to show us such differences in the character of the Assyrian bas-reliefs in the lower grave-buried palace, and that occupying the N. W. of the Nimroud mound, that one might think we read here a history of Assyrian power subverted, and of a strange (Egyptianised) race living and dying in and over their kingly halls, who were again subsequently so dispossessed, and eradicated by the re-establishment of Assyrian domination, as only to tell they had been ever there, by the mute and mournful eloquence of their graves! The course of ascertained Egyptian history, supports the silent evidence of these newly-discovered remains; their extreme antiquity and obscurity as respects all other historical authority, prepares for the reception of the established chronological computations of Chevalier Bunsen, which carry back the record of the succession of time, as synchronised with the

west, giving like intimation of a local Egyptian influence, with that shown in the palatial graves of Nimrod on the plain of the Tigris, adds great force to the truth of my exposition of the external impression, left lasting by the old Egyptians beyond their own land.—H. T.

circumstance of history, from a particular era, to an epoch infinitely more ancient, than any which previous research had as yet accorded to enquirers. For instance, to put the case on Bunsen's chronology; if the grave-buried palace above noted, had been destroyed or removed by Sesortosis II. (the great Sesostris of the 12th Egyptian dynasty, v. Bunsen *in loc.*), he, whom tradition asserts, I may add, the Assyrians to have deified,* a king whose exact entity research has identified, and whose exploits, history (v. Diodorus, &c. &c.) has ever celebrated, though confusedly with two others of the name who preceded and followed him :†—if he, I say, may be supposed to be the conqueror who settled an Egyptianised race in the seats of the Old Assyrians, this was about 2801 years before Christ, (v. Bunsen): about two hundred and fifty years after (B. C. 2560) commenced the era of a foreign domination in Egypt, that of the Hyksos, who seem to have been a

* ——— *και Σέσωστρις ἐκέινος τῷ κοσμοκράτωρ λέγεσθαι θεὸς τοῖς ἀσσυρίοις.* Fourth Chiliad of the histories of Johannes Pzetzes (556-7): I do not remember seeing this belief, mentioned out of the rich mine of tradition, which the above Byzantine has left us;—nor have seen this passage before quoted from him.—H. T.

† I append at length another ancient allusion to the historical mystery of Sesostris, now cleared up in our own day from a fragment of Paulinus' metrical version of the lost book *De Regibus* by Suetonius (Oudendorp's Ed. Bak. 1751, 2 vol. 8vo.), preserved by Ausonius Epist. XIX.

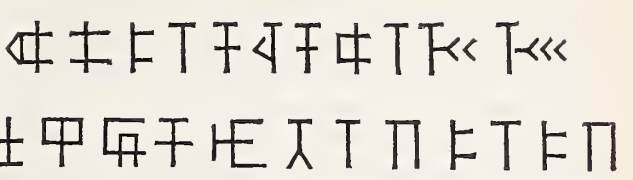
Europamque Asiamque duo vel maxima terræ
Membra, quibus Libyam dubie Sallustius addit,
Europæ adjunctam; possit quum tertia dici.
Regnatus multis, quos fama obliterata; et quos
Barbara Romanæ non tradunt nomina linguæ.
Illibanum, Numidamque Avelim, Parthumque Vononem,
Et Caranum, Pellæa dedit qui nomina regum,
Quique magos docuit mysteria vana Nechepsi,
Et qui regnavit sine nomine mox Sesostris.

It is curious to trace in this notice of the nameless Sesostris, (which word was doubtless taken, like Pharaoh, for a title) the confusion arising from the recurrence of a Sesortosis in several dynasties of Egyptian kings, and the result as expressed in obscure and remote tradition, at one time raising him to be a god, at another a mysterious monarch without a name! Incidents in study, like these, deserve record for the encouragement they hold out to research, which *will* in due time teach us.—H. T.

mixed race of Canaanites, and Bedouins (v. Bunsen); but, be they who they may, the description of the dominancy of Egypt by theory, will account for these graves in the Nimroud mound, first asserting the fact of her colonization there; and of the re-appearance of new Assyrian palaces, above these graves which surmounted the old ones, when the dispossessed race returned in victory to their ancient site of power.*

I have spoken as merely of conjectures in this paper; but as leading myself on to my own peculiar position, have, on the evidence of fact, moved the ancient Egyptian out of the "impress of his locality" into an ascertained residence towards the East, on the testimony of an archaiologist, and with the concurrence of an historiographer, who certainly wrote and thought as independently of each other, as distance and unconsciousness could make them do; meanwhile Mr. Layard affords strange matter for further conjecture in the inscription given below. "on a slab at Nimroud," he says, "forming a part of a wall in the south-west palace, but brought from the most ancient edifice, I found one line of writing in which the characters were thus formed. It occurred beneath the usual inscription, and was but slightly cut."

* Historic theories of the character above expressed, would a few years ago have been justly repudiated; but the progress of discovery begins to enable us to venture at an explanation of many mysteries; and no sooner does one astounding fact in the voiceless records of the past reach us from the East than in the West appears another, as strange and unexpected to corroborate the inference which the first directly points towards. I allude to the Egyptian character of the most ancient remains found in the tombs still extant, about the often nameless sites, of lost Etruscan cities, or rather, Etrurian, Umbrian, and Pelasgian; Dennis' Cities and Cemetries of Etruria. (Lond. 1848.) I may indeed go further still, as Mr. Dennis finds (Vol. II. pp. 39, 202), Etrusco-Ninevean traces, binding the East and West, as it were together. I cite for readier reference the passages in his excellent and intensely interesting work, which note the presence of an Egyptian element, in the early civilization of Italy. Etrusco-Egyptian, Vol. II. pp. 8, 296, 107, 114, 124. Pelasgo-Egyptian, pp. 48, 59, 62, 65, 72. Umbro-Egyptian or Siculo-Egyptian, p. 320, and for a combination of these archaic types, Vol. II. ch. 51, (Chinsi) and ch. 56, (Cortona) *passim*. On the latter site occur (p. 442), "many purely Egyptian idols," and a relic as indisputably pointing to an African origin, as the porcelain jars of the Egyptian tombs do to China,—the head in bronze "*of a negro*." Here then, again, we have ancient Egypt, carried out of her supposed boundaries in the most practical of proofs.—H. T.



"It is evident," he observes, "that by substituting the wedge or arrowhead for the lines in the above inscription, the character would resemble such as are found on the earliest Assyrian monuments." This is doubtless; but left as they are, do they not exhibit a type of the earliest form of the Lat character of India?* Again, Mr. Layard gives us a single specimen of a cursive character found also at Nimroud, in fragments of pottery; also on an alabaster vase with cuneiform writing, containing the name of the Khorsabad king. "It has been found," he says, "on Babylonian bricks of the time of Nebuchadnezzar."

This character I had thought at once recognizable, as the cursive Ario-Bactrian, occurring on the slabs found in the Stuppa of Mankyala in the Punjab, fac-similes of which are with the Society, and which Professor Wilson (Arian Antiquities) has decyphered, and arranged alphabetically. But our able Secretary, Mr. Laidlay, has referred me to another alphabet, dialectic of the Hebrew, as set forth in the interpretation of the bilingual inscription of Thongga (Journal Asiatique, Fevrier, 1843) to which be conceives the characters of this brief specimen may be considered more properly to belong. Another copy of this inscription (Trans. of the American Ethnological Society, Vol. I.) by Mr. Catherwood who terms it Punico-Lybian, confirms this view,

* It will require but a cursory reference to James Prinsep's table of the Lat characters (As. Soc. Journal, Vol. VII.) to establish the affinity of the above letters with the oldest Lat form in use about 500 years B. C. perhaps in a transition state from the cuneiform to the lineal character?

These inscriptions afford at any rate monumental evidence of the contact of an Egyptianised race, resident far beyond the confines of the mother-country with foreign nations, whose habitat lay, in one case certainly, eastward. We had already proof that the produce of the extremest Orient found its way to Egypt; that of China, namely, in the shape of articles of porcelain, of such inferior quality as to argue that the manufacture was in its infancy when they were made, this constituting another proof of their high antiquity: it had been conjectured that these small vessels found in the tombs at Thebes contained some precious ingredient, and that they had reached Egypt in course of commerce through India.* We have now to note what may have been the epoch of this early commerce by reference to a newly-established chronology; what may have been the direction of this intercourse geographically, and finally, what were the people who, as Sir Gardner Wilkinson says, "at a very remote period" occupied India in connection with the ancient inhabitants of the Nile valley.

It is necessary, however, that I should, before speculating further upon this connection, which may have been collision in the first instance, set distinctly before my reader, from the ancient literature and poetry of the Hindus, their character, first, as aggressors, and as warriors quite as bold and skilful as the Egyptians themselves; and then as occupants of a conquered country which they had incompletely mastered out of the hands of its ancient inhabitants :† I will, recapitulating what was said in the treatise above alluded to, assign dates, or an approximation to them to both these epochs, with such remarks on the comparative character of Egyptian and Indian conquest as may suggest themselves. By the side of this chronology, I will then place the new Egyptian time-reckoning of Chevalier Bunsen with some of his remarks

* Wilkinson, Manners and Customs, Vol. III. ch. IX.

† A certain school of even modern archaiologers has assumed with such certitude the pre-eminent antiquity of all things Indian, and has asserted this theory so dogmatically, that it is not inexpedient to notice here, what one of the latest of them, the learned Eusebe Salverte, and his editors, have ventured on in terming "l'Hindoustan, *le berceau de la civilization du monde.*" (Des Sciences Orientales, Eus. Salverte, 2nd Ed. Paris, 1843, p. 406.) The vague and unauthoritative character of this learned writer's deductions touching ancient India may perhaps be separately noticed in the Society's Journal hereafter, with reference to other points of history.—H. T.

and those of others on the nations with whom the conquerors of the Nile valley combated, or treated; and lastly, I will submit my hypothesis touching a possible recognition of the brahminical conquerors on their progress.

Nothing is more easy than to prove by reference to ancient Sanscrit authorities, that the skill in arms of the brahminical race was really such, as to render them no contemptible opponents to troops as highly disciplined as were those of Egypt. The institutes of Manu,* which in their present shape, must have been in existence, according to Sir William Jones' calculation, 880 years before our era, contain in their seventh chapter definite instructions, not only as to the policy of war, but as to its detail, prescribing the seasons for military operations (VII. Sloka 182), the division of the army employed (VII. Sloka 185), "elephants, cavalry, cars, infantry, officers, attendants;" and the formations in which the troops should advance into action, or adopt on the line of march (VII. Sloka 107). These were various, such as line, column, wedge, or double wedge, rhomboid with far extended wings, with other formations (V. Wilson's Dictionary, *vyuha*†) involving the establishment of reserves—of tried men, or distinguished by known marks, "who are excellent both in sustaining a charge and in charging, who are fearless and incapable of desertions" (VII. Sl. 190). Nor was moral influence on the soldier forgotten.

* Jones' works, Vol. III,

† Under this word, equivalent to array, several fanciful formations are mentioned, the ear-shape, and flag-shape, and the macaru, or shape of the sea-monster. It is curious to find this formation reproduced (Raffles' Java, Vol. I. p. 281) in an island colonised beyond a doubt from this country under the slightly altered form of mengkara; and it shows the nationality of the early conquerors of India, and their decidedly military character, that they should carry with them, and so firmly establish the use and practices of their system of war, among their descendants as to lead them to believe, not only that they invented these, but that the scene of the great actions recorded in the military epic of the Mahabharat, fragments of which exist (Raffles' Java, Vol. I. Sp. 411) among the Javanese, lay in Java, and Madura. Sir S. Raffles's description of the military character of the Javanese, and more particularly of their adherence to their ancient system of tactics up to a comparatively recent period (the Matarim war about A. D. 1600), is a sort of collateral testimony to the soldier-like qualities of the ancient race whence they (Sansc. Yavana, wanderers) are undouhtedly descended. See Pritchard's Physical History of Man, Vol. II. p. 221.—H. T.

The third chapter of these Institutes, ordains, writing of purification, (Sl. 98) "By a soldier discharging the duties of his class, and slain in the field with brandished weapons, the highest sacrifice is in that instant complete; and so is his purification: this law is fixed."

In the Hitapodesa (ch. III.)* a similar degree of military arrangement and precaution is inculcated, and it is curious that in this work we should find the centre of the position occupied by the foot soldiers, as if to them were entrusted the maintenance of the main array. "In both wings let the cavalry be stationed; by the horses, chariots; by the chariots, elephants; by the elephants, infantry." Infantry again it is remarked, are useful at all seasons, while horses and elephants are not so, and it is among the foot-soldiers the king is to be in action: "let the sovereign place the infantry before him and take his station." It is however said, that "the elephant is the chief of the forces," and "the horse the strength of armies." The author emphatically establishes, that—"a small army, if excellent, is a great one," an admitted military axiom, the truth of which has been singularly lost sight of by most modern eastern nations, with whom number has been ignorantly identified with strength. Both in this work and the institutes of Manu, rules are given in the chapters from which I have already quoted, for the selection of strong-holds, the latter recommending that the king should reside (VII. Sl. 70), "in a capital having by way of fortress, a desert of about twenty miles round it," or else in one of the five order of fortressess, viz. of earth, of water, of trees, of men, or of mountains, whereof the last is preferable.

There is a generosity of feeling manifested in the warlike practices of this early time, which bespeaks a singular elevation of sentiment: thus the brahman, we evidently learn, took no advantage in the field of that sacred character, which if violated "by a blow even with a blade of grass" (IV. Sl. 166) given intentionally, condemned the striker "to twenty-one transmigrations in the womb of impure animals." If even the blow be struck in ignorance of the law "so as to shed blood (VI. Sl. 167) from the body of a brahman, not engaged in battle," a very heavy, though indefinite, punishment is assigned for it. There is again a very manly and humane spirit in the following provisions:—(VII. Sl. 90). "Let no man, engaged in combat, smite his foe with

* Sir W. Jones' works, Vol. VI.

sharp weapons concealed in wood, nor with arrows mischievously barbed, nor with poisoned arrows, nor with darts blazing with fire." (Sl. 91.) "Nor let him in a car or on horseback, strike his enemy alighted on the ground; nor an effeminate man; nor one who sues for life with closed palms; nor one whose hair is loose and obstructs his sight; nor one who sits down fatigued; nor one who says, I am thy captive." (Sl. 92.) "Nor one who sleeps; nor one who has lost his coat of mail; nor one who is marked; nor one who is disarmed; nor one who is a spectator, but not a combatant; nor one who is fighting with another man." (Sl. 93.) "Calling to mind the duty of honourable men, let him never slay one who has broken his weapon; nor one who is afflicted with private sorrow; nor one who has been grievously wounded; nor one who is terrified; nor one who turns his back." It is impossible for any code of the most exalted chivalry to exceed in generosity, the noble temper of these prohibitions, and we must acknowledge that the people among whom such laws were current, must have attained a very high degree of civilization.

The great Sanskrit epic of the Mahábhárat abounds in expositions of the armament and tactical arrangement of the early Hindus.* It

* By the assistance of a Sanskrit scholar of eminence Bábu Neel Rutna Háldár, and of a very able and intelligent pundit Sarodá Prashád, long employed by the Asiatic Society of Bengal, I have heen able to prepare the following translated instances of what is stated above, from the Sections of the poem termed Bhishma and Drona Parva.

"O! Great king, now the hero (Arjuna) formed on hoth wings a disposition called Sringataka (the shape of a triple peaked mountain), which was very strong and capahle of hreaking that of the enemy.

On either horn of the array were placed Bhima Sena and Sátyaki, the great charioteer, with many thousands of cars, horses, and infantry.

Within the double hoat-shaped force stood the king of men, Arjuna, whose horses were white, and whose flag was distinguished by (the symhol of) the monkey; in the centre the Rájá. Yud'histhira, and the two sons of Mádri (Nakula and Sahadeva") Vol. II. (Calcutta Ed.) p. 465. Bhishma Parva.

"By Bharadwája (Drona) was formed a disposition in the shape of a car with wheels, which extended twelve coss in length, and five in hreadth.

This array was formed hy Drona himself with a numher of different valiant Rájás, who were placed therein, in different positions, and with numerous cars, horses, elephants, and infantry.

In rear of this disposition, drawn in the shape of the lotus, was formed a central

contains, with many episodes on various subjects, an account of the struggle for domination between the lines of Pándu and Kuru, two branches of the Lunar race of Indian sovereigns. The epoch of the history of the Mahábhárat,* has been fixed chronologically at about fourteen centuries before our era; its scene is laid in the country about Thánesar in Sirhind, a tract which has been the great battle-field of India, from time immemorial to our own days. The combatants were six Gangetic monarchs, those of Hastinápura, Mathurá, Panchála, Benares, Magadha, and Bengal, as well as Krishna who reigned in Guzerát. The tide of Hindu domination had not extended itself beyond the boundaries of Aryávarta, or in other words, further south than the Nerbudda river, even so late as the days of Manu, who after

array which was entirely impenetrable. In the centre of the formation shaped like the unblown water-lily, was also formed another under cover of it.

O! chief of Kshetriyas, numerous elephants, foot-soldiers, Rathins, (a) and horses appeared like (the meshes of) hundreds of thousand nets.

Warriors equipped with these shining weapons, bows, swords, scimitars, maces, javelins, and spears were posted amidst these armies.

Scimitars clear as the serene firmament, as well as shields made of the bull hide, and studded with hundreds of moons—glittered bright.

O! Great king, I have seen many elephants who were without their riders (lying in the field) like mountains, exceeding faint under the shafts of Bhishma." Vol. II. p. 643. Drona Parva.

"At mid-day, oh! great king, a furious battle took place, between Bhishma and Somaka, occasioning loss of lives.

I saw hundreds and thousands of horses of different countries, adorned with golden ornaments, running with the fleetness of the wind.

I also witnessed the horsemen running with their wounded horses, and causing their followers to run in all directions on the field of battle, with scimitars in their hands.

The elephants grappling with other elephants quickly came up to the infantry and horse. Then king Duryodhana sent ten thousand of valiant horsemen to resist the Pándavas." Vol. II. Bhishma Parva.

* Mr. Prichard in his 4th volume of the Physical History of Man has so massed together all authorities and opinions on this most interesting question (See p. 101, et seq.) that in place of referring to detached writers, I would earnestly recommend a perusal of his clear and compendious view of the subject, to all who feel any desire to imbibe definite ideas on a point of history, long either utterly obscure, or in the highest degree uncertain.—H. T.

(a) Those that ride in cars.

defining this region (II. Sl. 22) as the tract proper to civilized men, proceeds with a remarkable expression, which I never remember to have seen quoted with any reference to its force, to declare what country is holy, (II. Sl. 23). "That land, on which the black antelope naturally grazes, is held fit for the performance of sacrifices; but the land of the Mlechhas, or those who speak barbarously, differs widely from it."*

Now as the grazing ground of this antelope is confined to wide and open plains, and the land of the Mlechhas is put forward in contradistinction to it, the natural inference is, that the Hindus were as yet masters of no more than the open country, proving them by this evidence to have been a race of emigrant conquerors, imperfectly established in the land. The region whence they came, and the period at which they first appeared on the confines of India, are the subjects of enquiry which next suggest themselves, and chronologers going on the base of the ascertained date of the great war, and with the aid of the Rájatarangini, or annals of Cashmere, the only Indian history of any chronological authority, assign in the one case, 2256 before Christ, as the date about which the first Hindu colonies appeared on the confines of India, and in the other 2666 B. C. as the year of the commencement of the history of Cashmere, in which the first brahminical settlement appears to have been formed: Col. Tod, and Professor Wilson are severally the authors of these views. So much is certain, that Manu himself points to a northern origin (II. Sl. 17. 18), and that the great war itself was, as Mr. Prichard observes, (Vol. IV. p. 105,) an invasive movement southwards, "the first invasion of the Dekkhan by the sovereigns of northern Hindustan," indicatory of its being no more than a sequel of similar aggressions whereby the new sovereigns of northern India, had established themselves in the possessions they then held. In the case of a people, so marked as the Hindus by rigid adherence to ancestral habits, one may read their doubtful history inferentially; we know what was their onward progress of conquest after the age of the Mahábhárat, and knowing them to be strangers in the land they then occupied, may come to an easy conclusion as to the similarly aggressive progress by which they got there.

* For a notice of the Indian aboriginal races, see Prichard's Physical Hist. Vol. IV.

"Oh! Egypt, Egypt! fables only will remain extant of you, altogether incredible to later generations,—and nought will have fixed being, but the words hewn in the stone." So spoke prophetically, as quoted by Chevalier Bunsen from one of the Hermetic Books, Hermes to Asclepius; and, after the above review of the national character of another co-temporary people from their own written record of their habits and opinions, it is to the hewn stone, and the pictured wall that we must go back for an understanding of what were the warlike peculiarities of its congeners of the Nile valley, for the purpose of setting them in juxta-position with those we have just considered. It is not however necessary to encumber this paper with references to the evidence on record as to the eminent military character of the Egyptians. Their enterprise as soldiers, their discipline, and their prowess are sufficiently illustrated from their movements in works now happily diffused as a portion of the literature of the day. Their tactical arrangement of troops, and their superiority in the use of the war-chariot, are the two salient points in which, as warriors, they assimilate, almost to identity of custom, to the brahminical conquerors of India; who again differ from the Egyptians in two military usages, not less marked by the use of the horse as mounted equestrians, and the kind treatment of their adversaries in war,—the practical habit in the one case pointing to them, as a nation frequenting open plains, and still imbued with nomad instincts, and the moral restraint in the other, suggesting the existence of a scale of mental civilization infinitely superior to that of any other nation of antiquity: one might imagine that the generous forbearance of their military laws in the case of a flying or a vanquished foe, or even of an adversary taken at disadvantage, shadowed the germ of the Buddhistic doctrine of gentleness and mercy. The Egyptians, despite "the striking and even surprising analogy in social regulations, divisions and subdivisions of hereditary castes, the distribution of offices, the privileges and restrictions of different orders in the community," (Prichard's Phys. Hist. of Man, Vol. II. p. 193,) subsisting between themselves and the Hindus, exhibit sanguinary proofs of their having obliterated the attribute of mercy from their military code. In the well known paintings of Madeenet Haboo, the great Remses (Wilkinson's Egypt and Thebes, p. 61, *et seq.)*, appears triumphant over nations whose mutilated remains

attest "*in heaps*" the ghastly massacre which had ensued on victory; in other places, scribes appear reckoning the number of such trophies. I cannot, with Sir G. Wilkinson, (Manners and Customs, Vol. I. p. 392,) look upon this custom as consonant with a mode of warfare not barbarous, nor with this evidence of the value attaching to the token of actual slaughter, conceive that "the representations of persons slaughtered by the Egyptians who have overtaken them, are intended to allude to what happened in the heat of action, and not to any wanton cruelty on the part of the victors." Sir G. Wilkinson's argument as to Egyptian mercy, deduced from the single incident at Madeenet Haboo, where the crew of an enemy's vessel are saved from the sinking craft, might be turned, on his own admission that the soldiers received a reward after the amount of slain was ascertained (Vol. I. p. 393), clearly against him, the foe being saved from the water to die more profitably for their captors, ashore. In any case, the Egyptians who represent themselves as ruthlessly slaughtering a flying enemy, are infinitely barbarous as compared with, perhaps, a kindred race, who, as above quoted, forbade the slaying not only of "one who turned his back," but of "one who was terrified," or who even had his sight obstructed by his disordered locks.

Now there arises a somewhat curious consideration out of this fact, based in a measure on the new views of Chevalier Bunsen, and partly on the evidence of monumental remains,—that this blood-thirsty method of conducting warfare was unknown to the Egyptians, until after they had undergone the foreign domination of the Hyksos, or Shepherd kings. I am unable to trace the existence of carved or pictured evidences of Egyptian cruelty in war during the 1076 years (Bunsen's B. III. p. 122) of the duration of the old dynasties from Manes, 3643 years before Christ, to the end of the reign of Âmuntimaos.* In the

* Chevalier Bunsen gives from a very handsome tomb belonging to Nevótp, as his name is read, a high officer under Sesortosis II. one of the 13th or last of the ancient dynasty of kings, a singular instance of the mode in which conquered nations were anciently treated in civilized Egypt. "Here and in the neighbouring tombs," says our author, "one sees represented nearly all the occupations of ordinary life, hunting, fishing, dancing, play, the game (the *morra* of the Italians) played with the fingers: men blow glass, exactly as the Egyptians of the latter kingdom (or latter dynasties), and as we do." (Vol. II. VI. 2, Sesostris the

succeeding year, 2567 before Christ, began the reigns of the Hyksos dynasties, which lasted 866 years. To them succeeded the restoration of an enchorial monarchy, in what is called the 18th Egyptian dynasty, rich during its period of 229 years, with the names and acts of conquering monarchs; and it is during this period, more especially in the victorious reigns of Totmes the 3rd, and the great Remses, that the external triumphs of the Egyptians are pictorially celebrated, by those savage records of victory, of which I have previously made mention. Now as we cannot trace vestiges of the like cruelties before the Hyksos' period; and as "the intimate relation and almost exact parallelism that has been traced between the Egyptians and the Hindus," (Prichard *ut supra*) allow us to infer that the former were guided, while unpolluted by foreign intercourse, by similar laws with those which regulated the conduct of their supposed congeners;—the question arises, whether it were imitation of the savage customs of their

Great). Let me remark upon the exact similarity at all times here noted as obtaining in Egyptian usages, before proceeding to the one ancient exception so at variance with the customs current (v. Wilkinson) in this respect among the kings dominant, after the 866 years of the Hyksos rule. "But," continues Chev. B. "there is a pictured record in the above-named tomb of peculiar importance, dating in the sixth year of our monarch's reign, wherein are brought before Nevótp in great ceremony as a present from his lord 37 strangers, (perhaps meaning $\frac{1}{37}$ of the strangers taken,) as remarkable as such, by their complexion, dress, and the growth of their hair, as by being mentioned in that character in the inscription. A leader appears at the head of his followers, equipped with club, bow, shield, and lance; one of them strikes a seven-stringed lyre with the *plectrum*. The inscription terms them "the great captured strangers." Champollion seems to have maintained that they were Greeks. * * * Others have thought them to be the patriarch Jacob and his troop: and certainly the strangers appear depicted, although described as conquered, not as prisoners, with bounden hands, but free, and armed. This points at the embassy of some subjected northern people, perhaps too, depicts a tributary present, as shown in the gazelles, and the weapons which they bring."—I am at a loss to comprehend from what country of the *North* the gazelle could have come; but in another place the Chevalier repeats—"The remarkable representation of those light complexioned 'great strangers' in Nevótp's tomb points to the subjection of a northern people,"—not necessarily *northern;* but certainly to their humane treatment as "captured" *(gefangenen)* by Sesortosis II.—H. T.

rulers for the time (the Hyksos), or retaliation of cruelties and oppressions sustained for many centuries (to the hardening, doubtless, of the hearts of the oppressed), that originated among the Egyptians a barbarism in war utterly at variance with their advanced Hindu-like state in what we can see of their other habits? I read a sort of answer in an important observation, recorded by Mr. Layard with his usual accuracy, as respects the corresponding graven records of like cruelties discovered by him at Khorsabad, Konyunjib, and Nimroud: he made it in his consideration of the use of writing among the ancient Assyrians, but it has served a double purpose. "In the most ancient sculptures of Nimroud, there are no representations of scribes. *In the more recent however*, at (the three places above-named) we have eunuchs writing down the number of heads and the amount of spoil, on rolls of leather, or some other flexible material," (Nineveh and its remains. Vol. II, p. 184,) and the representation of this is given by Mr. Layard, where two figures, one bearded, the other apparently a eunuch, record the heads, a heap of which has already accumulated at their feet, brought to them by victorious soldiers. The possible use of the papyrus by these scribes leads Mr. Layard on to a consideration of the intercourse between Assyria and Egypt, about the period recorded in the sculpture, and this he with the concurrence of Mr. Birch, the learned co-labourer with Chevalier Bunsen in his Egyptian enquiries, refers *at the earliest* to the 18th Egyptian dynasty, or even to an epoch long posterior to it, that of the 22nd dynasty, which commenced only 982 years before Christ.

The necessary deduction from all which is, as respects the characters, habits, and opinions of the ancient Egyptians, that there is nothing in the pictured records to shake our belief, that anterior to the Hyksos dynasties, they possessed a degree of moral civilization, not inferior to that described in the written records of the Hindus; and that altogether consonant with the character attaching to them historically, as the benefactors and instructors of mankind; nay, further, we are enabled, under this impression, to confirm ourselves in the idea that the graves of that early Egyptianized race, whose very memory, like that of the old Etrurian tombs in Italy, had passed from the minds of those who superimposed palaces upon them,—give evidence, in the unwarlike nature of the objects they contain, of the resting place of a

tribe of peaceful settlers,* a point of value in my argument: for it enables me to connect the mythic and traditional histories of Egyptian influence beyond the confines of the Nile valley, with something so positive as a monumental record of that influence; and to find in 'the Egyptian Bacchus conquering and colonizing India,' the type of its existence, as belonging to a state of society anterior to the subjugation of old Egypt by a foreign race, and the partial corruption of its ancient habits.

What those habits were, appear, (to cumulate evidence,) in the character of the earliest types of the divine power among them,—the eight, or, according to Bunsen, the twelve, ancient gods, forerunners and begetters of the twelve Mediæval gods, to whom succeeded the Isis and Osiris worship, or third pantheon of Egypt. The symbol of power in all the representations of gods, on the oldest monuments, is "a sceptre termed," says Chevalier Bunsen, "*Gam*, and assumed as the emblem of a mild authority." Ammon, "the hidden god;" Khem, "the creative power;" Kulph, "the soul;" Moot, "the mother;" Ptah, "the Lord of truth;" Neith, "whose name is called, *From myself I come;*" Phra, "the sun;" are the chief deities of an ancient Pantheon, the spirit of which is peace. In them lies, to us, a recovery of the genealogy of ideas among a primitive people, who thus expressed figuratively their conception of the attributes of the godhead, worshipped variously in different localities of the same country; but, when its separate states were united under one ruler, forming indistinct acceptations of the same fact, the ground work for another creed, more wildly and loosely imaginative, and adopting itself, by borrowing from foreign sources perhaps, to the altered and altering habits of the nation. Thus in the second Pantheon of Egypt, and only there, among, even then, only the supplemental or minor divinities, we find *Anata*, or Anaitis, the goddess of victory, the first evidence of whose worship

* There is in the Egyptian types found in Etruria, a like absence of anything aggressive or injurious. The most remarkable instance of the barbarism of mutilation in war, as noted by Mr. Dennis, occurs on a vase at Volteria, representing the scene before Thebes, where one of the besiegers grasps a severed head by the hair, about to hurl, it into the city, (Cit. and Cem. of Etr. II. p. 176) a practice common afterwards with the Romans: "the style of art shows them to be of on very early period."—H. T.

does not occur, according to the accurate researches of Mr. Birch (Æg. Stelle. 1, 6, II.) on any monument anterior to the time of Ammenophis I. or the beginning of the eighteenth dynasty: her effigy, says Wilkinson, "is rarely found, and never as extant in a temple." Thus we have the earliest deification of the purely aggressive principle, exhibited in Egypt, at a period posterior to the rule of the Hyksos. But there is yet another point of still greater moment, as additionally proving the identity of origin in the case of the Egyptian, and the Hindu races,—the knowledge of which takes us a step beyond what has been as yet established as to their ancient analogies in moral opinion and practice; this is the verification of the assertion of the ever-true Herodotus, as established by Bunsen (v. 1, 6, III.), that the worship of Isis and Osiris,—or Isis, Osiris, and Horus, (*Her-God* in Egyptian, thus latinised,) was the only religious form "that was honoured and accepted throughout all Egypt." For a critical examination of every available monument, document, or authority shows that, "to speak out in plain terms," as Bunsen says, "the first and second Egyptian Pantheons are nothing more than the development, first in undivided and subsequently in subdivided theistic forms of particular attributes of Isis and Osiris, or of both as either compared or combined." Isis and Osiris, singly or together; or Isis, Osiris, and Horus in one, comprehend directly in themselves that whole Egyptian theistic system, which stands instead of Ammon and of Kneph, the hidden god, and the soul. What are these words but Colebrooke on the Vedas once again? "According to the most ancient annotations of the Indian scriptures"—those, that is, which hold here the place in history of monuments and graven stones—"these numerous names of persons and things are all resolvable into different titles of three deities, and ultimately of one God. The inference that these intend but one deity, is supported by many passages in the Veda, and is very clearly and concisely stated in the beginning of the index to the Rig-veda, on the authority of the Nirukta and of the Veda itself." In this identification of a first common belief we touch the root of the matter, and the mystery of the Egyptian theistic darkness is dispelled;—so that there is no need to recapitulate identities, however exact, in posterior creeds and doctrines, as to the eight Gods, the mundane egg, and so forth. Nay, we have even a clue, and a direct one, to the mental process

which created these theistic subdivisions in old Egypt, by study of the Buddhist and Bráhminical controversies,* in which dogmas on the one hand, and philosophic speculations on the other, show how sects were formed and new opinions started on the primeval basis of a hidden cause;—a soul or conscious vitality;—and thence *Her* or *Shiva*, as the case may be,—a triune God.†

But let us go from the natural to the mythic idea. It was said, years ago, by a very competent enquirer that, "the usual character of humau testimony is substantial truth under circumstantial variety;"‡ and when such testimony is offered by witnesses unconsciously repeating the tale already told by others in another shape, why reject the whole as fable?—or why, in the endeavour to analyse either part of it separately, lose the spirit of the general tradition iu which alone consists the clue to its true meaning? "These old tales and histories work according to their epoch so through and through each other, that they become hard to separate," observes Goethe, "and the wider they are sundered the greater the rents made in them."§ What are the Orphic and Pythagoric theories of abstiuence from animal food and the shedding of blood (Sobeck Aglaophamus, Lib. II. c. II. *de vitâ orphicâ)*, but the Buddhist doctrine inculcated in the Asoka edict (As. Soc. Jour. Vol. IX. p. 616) extant on its granite block in our Museum? What are the tales as to the origin of Cereal culture, and the pruned vine, but like indications of the progress of a settled society superseding the wild habits of the nomad and the huuter?

The mystery of Bacchus and Ceres is expressed, mystically, with reference to their mythic story, and, physically, with reference to the things they typify, wheat and its culture on the one hand; and on the

* The new edition of the Pilgrimage of Fa Hian in which my able friend, Mr. Laidlay, honorary Secretary to the Asiatic Society of Bengal, has enriched with his own valuable notes and illustrations all that Abel Remusat, Klaproth, and Landresse had already given the world on this interesting text, has (ch. xvii. 21) a compendious notice on this head affording easy reference.—H. T.

† The idea in which the hidden cause is taken by the Buddhists, with the sequence of the soul, or life creative and eternal, opposed by its causative converse, death, whose dominion is for a time only, gives the dual of a Godhead, Ormuzd and Ahriman, of ancient Persia, with the Manichæan and other dualistic creeds.—H. T.

‡ Paley, Evid. Christ, ch. II. 289.

§ Tag and Jahr Hefte, II. p. 19.

other that of the grape together with its produce. As saith the Scholiast (Pind. Isthm. VII. 3), (which I translate from Sobeck's Aglaophamus,) (B. I. p. 150), Dionysus the associate of Demeter; according to the mystical saying, because Zagreus Dionysus, born of Persephone is associate to or connected with her; but in the physical sense because the use of wine follows close upon that of wheat as food, the which is referred to Demeter. Varro (Augustinus Civ. VII. c. 20 *apud* Sobeck) explains the Eleusinian mysteries of Ceres with reference solely to the growth of corn, saying that Proserpine typifies simply the germination of its seed, which failing, gave rise to the fable that the ruler of the Shades had borne away Ceres' fair daughter. This fanciful and elegant exposition of the productive powers of the earth is too common to need further comment; but the excess of generative force assigned to the myth of Bacchus, as master of the vine, is greatly in advance of that of Ceres, and, as a symbol, is much more generally diffused. Bacchus, or Zagreus Dionysus, destroyed by the Titans, his limbs dispersed, and he himself reproduced and revivified even as Osiris was destroyed in like manner by Typho, and again revived, gives the idea of vital action and reaction.* Bacchus is sometimes the νοῦν ὑλικόν, or typical incorporation of mind with matter (Macrobius in Somn. 1. 12. p. 67, *apud* Sobeck): he is δημιουργὸς (Proclus in Tim. III. 184, ibid), sung of the more ancient poets as, brahmin-like, "twice-born," and filled with a creative force, second alone to that of Jupiter† himself. Identified with Osiris, he is Egyptian, and goes forth a conqueror of lands, being the Bacchus of the Nile mentioned by Herodotus; at another while (Cicero de Naturâ Deorum III. 23), he is the son of Jove and Proserpine, or the re-active force produced by the creative and germinative elements, or the son of Caprius (according to

* The cultivation of the vine in Egypt has been doubted, as having been anciently practised: Sir G. Wilkinson (Manners and Customs, Vol. II. p. 152, et seq.) has largely established the fact, and the eminent care bestowed on the plant, which was trained, as to this day in Hindostan, over alleys of poles and thwarts, which the vines ultimately covered so as to form a continuous arbour. The hieroglyph to express *vineyard* is the conventional representation of such an alley. The story of Bacchus and of Osiris might be taken as figuratively expressing the plucking, crushing, and fermenting of the grape, a primeval antitype of Burns' 'John Barleycorn.'—H. T.

† Cap. x. lib. II. Aglaoph. Sobekii, et ibid, imo passim.

other accounts one of the Cabiri himself) king dominant in Asia; the offspring of Jove and Luna, i. e. of the creative element and the seasons (?); or lastly of Nisus and Thione.

It will be seen that we have insensibly passed from the mystical and physical character of the wine-god to his true mythical nature as an accessory to history. He is the invader of India, a peaceful one however, surrounded by troops of merry followers who with dance and shouting, herald his coming, and gladden the way he takes: he, as the very type of that fertility which culture directs to the benefit of mankind, becomes predominant as a king in Asia, the fertile; or as one of the mysterious three (as some say, *seven*) Cabiri, or as the son of one of them, he stands forth in dim tradition as among the number of the first benefactors of mankind. But Sobeck, the great critical historian of the mystical creeds of the Greeks, has contented himself with a mere examination of the actual nature of the mysteries as practised by them. He is the antagonist of all symbol-mongers;—he disbelieves in types and their alleged origins;—he refuses to acknowledge that Bacchus is Osiris, or indeed anything, beyond the *expost-facto* application of a fable to local practices current for years at the different seasons of the year among the early cultivators of scarce known and half-settled countries. In spite of this, and with all deference to so great an authority, I must take facts, laid open before us since he wrote (A. D. 1829), as authorising the admission of the type of the Egyptian Bacchus, as indication of the progress of civilization in whatsoever quarter the Egyptian evidences of that progress be discovered, be it by Dennis in old Etruria, or by Layard on the banks of the Euphrates. My first citation is of course purely collateral in proof, as showing generally the excursive character of this civilization; my second takes us directly on our Bacchic way towards India, to be met, we know not as yet at what point, by a race coming from another quarter; but verging to the same focus as ourselves, destined to fill the untried land with a modified form of Egyptian institutions, derived, shall we say, from one common source with these? The plurality of Bacchic gods, or of Bacchic types exceeding the number, as I have incidentally noticed, which is cited by Cicero, points in the historic application of the myth, to the identity of Bacchus with that description of inventive spirit in man, which diverts him from the chase and

the pasture to the elicitation of the productive powers of the earth. Even the biblical assurance that "*Noah was a husbandman,*" is confirmed to us by the record of the fact of his having "*planted a vineyard;*" and with this license for adopting the vine-type as the index to a settled and civilized existence, I need do no more than cite a parallel, but more familiar, instance* in mythical lore, to prove how

* Concurrent testimony shows us Hercules as a good type of the mythic process; he is Egyptian, Theban, Peloponnesian, and Dorian, on which three last Thirlwall (Hist. Greece) is excellent:—he is Phœnician as his name, *yercol* 'the Sinewy,' in Syriac, intimates, (Bishop Cumberland's Sanchoniatho apud Eusebium,) translated ἀρκλῆς: his twelve labours have received an astronomical application to the passage of the sun through the zodiacal signs: in history he is during the heroic period ubiquitous, always in connection with these labours, but not with reference to any astronomical application of them: he is (Sophocles' Trachiniæ) πολύπονος *the many laboured:* in the Philoctetes of the same author he is made to boast painfully of his deeds, while Euripides calling him *the mighty* (ὁ κλεινός) speaks of him (see the speech of Lycus in the Hercules Furens) as renowned only for brute force (τἄλλα δ' οὐδὲν ἄλκιμος) but famous no otherwise: the reply of Amphitryon, the 1st and 2nd choruses of this play, and the boasts of Hercules himself in it, exhibit the same stamp of character: all is material, as opposed to mental merit: thus Aristophanes in the last Act of his play of 'cuckoo-cloud land' (Aves) makes Hercules, sent on deputation from Olympus with Neptune, and a certain Triballus (a barbarian god who cannot speak Greek)—a bully, a blockhead, a traitor, and a glutton: F. Schlegel (I. p. 318 Geschichte A. and N. Lit.) notes Hercules' strength as a comic attribute, the attribute of mere force without mind, ludicrous from its unmeasured disproportioned excess:—this is a little epitome of the popular Grecian view of this hero, whom I take, in connection with his labours, to be simply *a mythic exposition of force used for good ends:* all his labours are beneficial, but he is a fool only able to boast of his endurance; but being always called in to aid the weak, or put down public evils (as we hear ever so-and-so was successful *with the help of Hercules)* I read in him and his twelve labours merely the lesson of good effects in the application of animal power to benefit instead of oppress mankind,—to which latter purpose it was from evil instinct, first applied. This reading of the meaning of the myth of Hercules was singularly confirmed by the manner in which Chev. Bunsen notes him as appearing (Æg. Stelle. I. 16, *Khunsu* χῶν) in his primeval form as attendant on other gods. "Out of all this" says he at the close of his summary, "one sees expressed *the character of the intermeddling accompanying god,* who figures now after Horus, at another time after Thoth." Will this idea, carried out as respects the twelve gods of the second Egyptian Pantheon, in which he first is seen, give us a fresh clue to the meaning of the twelve labours?—H. T.

the very plurality of beings in the case of any one alleged originator, points in all such cases, to the general exertion of a particular power, under the reiterated expression of a single name, or its acknowledged typical synonym.

The beneficent character of the early Egyptians in their intercourse with foreign nations, and their similarity in this respect of moral civilization with their congeners, the Hindus, being once established, as extant in times which Bunsen's chronology, and Layard's practical research now admit within the limit of the historical period, I take up the interesting question of their external relations at a much later epoch, when, having cast off the domination of the shepherd kings, they marched victoriously into other lands in that revengeful and savage spirit, of which they have left us such ample evidence. I cannot attempt this enquiry without quoting Chevalier Bunsen's excellent remarks upon such investigations, which at this time he deprecates, in order to show on what grounds an exception to his rule may, in this case, be admitted. He says (v. II. VI. VII. Sec. 2), "And here we must allow ourselves a word on the treatment up to this period of the names of foreign nations on Egyptian monuments. We stand in respect to a knowledge of these nations and countries on the threshold of great discoveries; but it will be very wise not to overstep this threshold prematurely. Since it seems overhasty, to declare summarily, as does Champollion, nations designated as northern to be Asiatic, and seek their names, if they show no affinity with known countries as Kanana and Naharáim (Canaan and Mesopotamia), as well in new catalogues of peoples as in Iran and Turan,—and not to find them." It is certainly, as above described, an overhasty process of nomination; the which sound reflection has not however hindered its author from concluding in p. 324 of his II. volume that the "great strangers" of Nevótp's tomb, whom he at p. 310, had termed a northern (European) people, "might still well be, even considering their light complexion, an Asiatic one." I do not myself desire to proffer conjectures in this spirit; but, while following the recorded exploits of the Egyptian conquerors of the 18th dynasty, should I find them connected with a people, whose habitat I can establish, whose conventional name I can recognize in their own language, whose position as a semi-nomad race I can chronologically define, and whose necessary intercourse and fami-

liarity with regions approximating to Egypt, I can deduce philologically from graven records and on the surest grounds,—I do not think I shall have overstepped the threshhold rashly, apart the minor details of identification which may have encouraged me in the attempt.

On the material point of chronological coincidence, I cannot be clear until I have laid before the reader, the Chevalier Bunsen's summary of results, derived from his acute examination of all authorities, bearing on the Ancient History of Egypt, as follows :—

"Chronological review of the Egyptian successions from the oldest historical contemporary point of incident, to the first year of Menes.

The re-discovered era of Menophthah.

We have found by means of critical examination into the internal evidence of the kings' lists and the monumental records, the following reckonings :—

The eighteenth dynasty lasted in nine reigns, ...				229 years.
The nineteenth,	,,	,,	five ,,	112
The twentieth,	,,	,,	twelve ,,	185
The twenty-first,	,,	,,	seven ,,	130
That is, in 33 reigns,.....				656 years.
The common average of the duration of these reigns,				$19\frac{1}{2}$ years.
,,	,,	of those of the eighteenth,....		$25\frac{4}{9}$
,,	,,	of the nineteenth, ...		$22\frac{2}{5}$
,,	,,	of the twentieth,.....		$15\frac{5}{12}$
,,	,,	of the twenty-first,.....		$18\frac{3}{7}$

Our tables of cotemporary chronology (given at length in the fourth Book) show that reckoning upwards. The fifth year of Rehoboam corresponds with the 21st year of Sheshonk-Sesak, first king of the dynasty next ensuing, both periods corresponding with the 962nd year before the birth of Christ; for our investigation into synchronisms shows that the earliest possible period, we can assume is 963, the latest 961: taking 962 as the mean, we find by reckoning upwards from this date the following dates for the main periods of the Egyptian successions through which we have as yet run.

First year of Sheshonk (XXII. 1),..	B. C.	982
End of the 21st dynasty (lasted 130 years), ...		983
Beginning of ditto, ...		1112

End of the 20th dynasty (lasted 185 years), ...	1113
Beginning of ditto	1297
End of the 19th dynasty (lasted 112 years), ...	1298
BEGINNING OF THE REIGN OF MENOPHTHAH, ...	1322
Beginning of the 19th dynasty, ...	1409
End of the 18th dynasty (lasted 229 years), ...	1410
Beginning of the 18th dynasty, and of the new kingdom, ...	1638
End of the Hyksos dynasties (lasted 866 years),.....	1639
Beginning of them, ...	2567
End of the ancient kingdom (last year of Amuntimaos XIII. 3), which lasted 1076 years, ...	2568
Earlier reign of Amuntimaos (62 years), ...	2630
Beginning of the 13th dynasty (lasted 24 years—two first kings),	2654
„ of the 12th..... („ 147 years—four kings), ..	2801
„ of the 11th..... („ 16 years—one king),.....	2817
„ of the 8th ..... („ 128 years—seven kings), ..	2945
„ of the 7th ..... („ 22 years—one king),..	2967
„ of the 6th ..... („ 107 years—three kings), ..	3074
„ of the 4th (Pyramids) („ 155 years—four kings, ...	3229
„ of the 3rd ..... („ 224 years—nine kings,) ..	3453
„ of the 1st ..... („ 190 years—five kings),....	3643

According to this the era of Menes commences 3643 years before the birth of Christ." (Ægypten's Stelle, 3rd Book, II. E.)

A glance at this table, in which the era of Menophthah is prominently put forth by Bunsen on account of the discovery of the commencement of the last Egyptian cycle of 1460 years (the cycle of Sirius) during this reign, will show distinctly the periods during which the Egyptian connection with an eastern race is traced, as yet, with no purely historical outline: that the Indian Ráma is necessarily the Egyptian Bacchus, because *Ráma* (the high) is a pure Egyptian word, the root of the word *pyramid;* or that Brahmá, Vishnu, and Shiva or *Hara (Her*-god) are Amun, Kneph, and Her or Horus; or that, as the late Mr. Csoma de Korosi held in opinions* which he would never publish

* In a note to Dr. Campbell's Report of the last days of this most learned and estimable man (As. Soc. Journal, No. 124, 1842), I mentioned his mysterious method of conversing with me on such views as he seemed desirous of holding for his own satisfaction only: he never inclined to such conversation save when I

to the world, the name of ancient Bok-Hara (with other nomenclatures of other places) pointed to their occupation by a people that professed the Hindu religion, and spoke Sanskrit,—all this sort of thing is no proof, though it goes, *quantum valeat*, to the formation of private convictions. But it is of value as respects this period to have added, as I think I have done, to the known amount of moral analogies subsisting between the old Egyptians and the ancient Hindu settlers in India: and also to have commenced lending importance to the semi-history of its mythic traditions, *by a positive fact*, resulting from the visible evidence afforded by recent antiquarian discoveries. It is in nowise germane to our purpose to linger over the identification of the "great strangers" of Sesortosis the second; nor question whether our knowledge as natural historians would not assign to them, with their antelope, an eastern origin: it is, on these subjects, so easy to start hypotheses, that the very fact of the habitat of the black antelope being, according to Manu, the limit of Hindu civilization, might, with imaginative persons, serve as the basis of a fair theory as to the identity of the men, who brought with them this type of their exclusive right to be classed, as with the Egyptian castes, as not of the *Mlechchhas*, or unclean outcast men. The arbitrary assumptions of learned men and great authorities have been hardly less startling than the above, as regards the identity of the nations, whose names and conditions, as depicted on monuments of the 18th dynasty, or later empire of Egypt, I shall now, taking Sir G. Wilkinson for my guide, briefly recite.

1. *The Shairetana* inhabit a maritime country of Asia? wear a peculiar horned or crested helmet—features large, nose aquiline—far fairer than the Egyptians—appear as enemies and allies at different times.

2. *The Tokkari*—neighbours to the above, as they appear escaping in their ships?—wear a Persepolitan helmet, and a cuirass like the above—used war-chariots,—also carts with solid wheels for their women—facial outline pleasing—enemies and allies as above.

3. *(Name lost)*—wore a high fur cap like the ancient Persians—

visited our Museum, where he lived, when it was closed (as on Sundays), and perfectly quiet: I heard from him enough to know that an immense amount of the strangest erudition died with him.—H. T.

features remarkable, strongly defined, nose high and prominent—Asiatics.

4. (*Ditto ditto*)—appear with the above as allies—their ornament and dress, a tunic, shield, bow, and club, only discernable.

5. *The Rebo*—very formidable enemies,—numerous—Asiatics—eyes blue, nose aquiline, beard small and red—dress rich with many ornaments—inhabit a country of northern Asia very distant from Egypt, and far more temperate in climate ; weapon, the bow—Parthians ?

6. *The Pount*—bring tribute of leopard, baboon, ape, ostrich eggs and feathers, ebony, ivory, &c. : they are Nubians (Bunsen).

7. *The Shari*—Assyrians ? or Arabians ? nose prominent, cheek-bones high, beard large—robes loose and handsome—well armed, and own fortified towns, which after defeat in the field they defend bravely—the name points to Assyria.

8. *The Toersha*—a maritime people—connection with Egypt undefined—appear as conquered.

9. *The Mashoash*—Asiatics as well as No. 8,—differ in dress, but not in feature from them.

10.—*The Kufa*—inhabit a part of Asia considerably to the north of Palestine—long-haired, dresses rich, boots of cloth or leather highly ornamented—a rich people—bring tribute in the precious metals, with knives, beads, a little ivory, leathern bottles, and bronze or porcelain cups—their hair in tresses, descends to the middle of the back with projecting curls on the top of the head.

11. *The Kheta or Sheta*—a remarkable people whose troops were highly disciplined—skilled in fortification even to the use of the double fosse—use chariots, and have some cavalry,—seemed to consist of two distinct tribes—Scythians according to Champollion.

12. *Other nations*—who do not fall within our enquiry, being negro tribes, or apparently Canaanitish nations, &c. &c.

I must however, from among the miscellaneous classification of the above, except for special notice one race, the Ethiopian, whose habitat to the south of Egypt is designated markedly by the character of the tribute they bring ; the long-horned ox, still extant in Abyssinia, occurs represented in such fashion as to induce assurance that the breed was peculiar, even at this early age, to one portion of the land ; while, to mark the locality of this nation still more plainly, they

appear bringing that peculiar animal, the giraffe, the earliest *modern* notice of which is, I believe, by Marco Polo;—certainly by no naturalist before the sixteenth century. The sole habitat of this creature is in the forests of Nubia and Ethiopia, and the central tracts of Africa, says Pennant, not south of the Orange river, and so his range is as high as Senegal; he does not occur towards the west. Now, on the scheme of suppositions above suggested, we may see in this visit of nations, the men of Sidon with their ships;—or the Persepolitans;—the Armenians or the Parthians;—or the Assyrians, or, in the warlike Kheta, the "royal Scythians" of Herodotus; or even, in the Kufa, the sycophancy of some artist, who, from description, has endeavoured to represent the inhabitants of a country still further east bringing their silver, bronze, and porcelain as tribute;—all these theories *might*, some of them *do*, pass muster; but no one has seen the necessity of theorising as to the identity of the tribute-bearers of the giraffe. They, although their country was, and is, well stocked with, to speak technically, other pachydermata of great size and beauty,—they are represented as leading with them this rare and beautiful creature, type-animal of their land, and thus they stamp themselves Ethiopians. Had the representatives of any of the other nations about which we are in doubt, been provided in like sort,—had we found for instance a camel among them (the figure of which has never been seen on any monument in Egypt)—we should have recognized those with it as Bedouins; but such is not the case; there is but one considerable people else, whom, as depicted on the monuments of the 18th dynasty, we are enabled to identify by an index of like certitude, and them Sir G. Wilkinson describes as follows:

"The Rot-ñ-no, supposed by M. Champollion to be Lydians, were a nation with whom the Egyptians waged a long war. Their white complexion, tight dresses, and long gloves decide them to have been natives of a much colder climate than Egypt or Syria; and the productions of their country, which they bring as a tribute to the victorious Pharaoh, pronounce them to have lived in the east. These consist of horses, and even chariots, with four spoked wheels, very similar to the Egyptian curricle, rare woods, ivory, *elephants*, and bears, a profusion of elegant gold and silver vases, with rings of the same metal, *porcelain*, and jars filled with choice gums and resins used

for making incense, of which a greater quantity was derived from their country, than from any other tributary to Egypt. Their features were regular without the prominent nose that characterises some eastern people, represented in the sculptures; and they were of a very light colour, with brown or red hair, and blue eyes. Their long dress usually furnished with tight sleeves, and fastened by strings round the neck, either closed or folded over in front, and was sometimes secured by a girdle. Beneath the outer robe, they wore a kelt; and an ample cloak probably woollen, like the modern *herâm* or blanket of Barbary, was thrown over the whole dress; the head being generally covered with a close cap, or a fuller one bound with a fillet."

Now the elephant is evidently with these people, the type-animal; they are the only nation which presents it, and, as Mr. Layard has observed with reference to the elephant on the Nimroud obelisk (Nineveh, Part II. ch. VI.), the small size of the ear shows it to have been the representation of an Indian, not an African elephant. Mr. Champollion may have termed these people Lydians, and Mr. Birch may incline, as Mr. Layard says, "to identify them with the Cappadocians or Leuco-Syrians, inhabiting the country to the north and south of the Taurus: who, he conjectures, are also represented at Khorsabad. Their physical characteristics in the Egyptian sculptures are a light complexion, brown, or red hair, and blue eyes; and they bring horses, chariots, rare woods, ivory, gloves, a bear, and gold and silver vases *with the head of Baal.*" This description is taken from Birch's Memoir on the statistical tablet of Kurnak, though Sir G. Wilkinson is afterwards quoted; and certainly if Mr. Birch suppresses all mention of their type-animal, the elephant, which I do not doubt puzzled him in such company, and gives them *a head of Baal* which the exact Wilkinson has failed to see, he may "incline to identify" them with any thing he pleases; but untill he can prove the habitat of the elephant to have ever been Lydia, or Cappadocia, or Leuco-Syria, or any where to the west of the Indus in Asia, of which, as Mr. Layard justly observes, there is no record, he must abandon his hypothesis. For these tributaries, or ambassadors, are markedly furnished as with all the other nations represented in their company, with the produce, live or dead, the manufactures, and the very shrubs sometimes, peculiar *to their native land;* and consequently as *they* are the only people who

bring an elephant, and that elephant is an Indian one, they are necessarily Indians,—by which I understand dwellers on the banks of the Indus,—at least as necessarily as the habitat, otherwise doubtful, of the nation acknowledged to be Ethiopian is decided by their bringing with them a giraffe.

As I have placed the elephant upon the Indus, or in spots immediately adjacent to it, and as that animal is not now, to the best of my knowledge, found wild nearer the Sutlej even, than in the Dera valley, at the lower extremity whereof the Ganges leaves the hills, I am bound to give reasons for assigning, even at so remote a period, that *locus habitationis* to a creature, no longer heard of there. As late then as 1519 A. D., the rhinoceros, the shyest and most skulking of the larger pachyderms, was an ordinary object of chase on the Indus, and in the Punjáb, on the authority of that most accurate and intelligent of autobiographers, the Emperor Baber (Baber's Memoirs by Leyden, pp. 253, 292, 316.). As the animals affect similar covers, if the elephant were not there at that time, which Baber does not mention, he must have been harassed out of the country by centuries of pursuit, which the rhinoceros, being almost valueless but for his hide to make shields of, had escaped. But Baber mentions the wild elephant at places, strange to modern ears, as Calpee,* and Currah Manickpore (p. 315),—about Chunar (p. 407); while he notes, in another place, the lion and rhinoceros near Benares. If the argument, 'they *were* not because they *are* not,' be untenable on the evidence of three centuries, how ten times less against the silent inferences of thirty?

These Rot-ñ-no then were a people from about the banks of the Indus, or beyond it, who came into communication with the Egyptians, about 16 centuries before our era; but on the received idea of *an Indian*, that is, of a black or brown man, inhabiting a torrid climate, these fair-complexioned, blue-eyed, red-bearded strangers appear in-

* Within the last twenty years I have known the elephant, wild, though not in herds, in the bed of the old Ganges, not far from Meerut in the Doab, and the extinction of the lion in Hurriana has happened within that time: this animal was shot on the banks of the Chumbul, not very many years ago. I may mention that the present babitat of the rhinoceros is no where further west than the jangals of Pillibheet in Rohilkhand,—so much, with the cultivation and desiccation of countries, does the locale of their wild tenants vary.—H. T.

compatible with their own supposed habitat. This depends exactly upon the assumption that they have been long fixed residents in and about the low country on the Indus and the Jhelum, in which case they would we know (Prichard's Researches, I. 228) have contracted a greater or a less affinity, with the melanocomous character of complexion, as the result of the climate of those sites ; but this is not the case with them : whence it follows that they had only recently arrived in, or perhaps that they but casually visited as yet the low country, the peculiar produce of which they are represented as displaying.

Now, whatever changes have occurred in these regions, climate has at any rate remained the same ; so that when we now find a Caucasian race, fair-complexioned, brown or red-haired, and often red-bearded, still now occupy the Alpine valleys of the Indian Caucasus, from below the Hindu Koosh to Cashmere, in the easternmost of which the Indus has his course and the Jhelum his origin, we must conclude that the predecessors in this habitat of the Afghan and Cashmere tribes had no other physical attributes than themselves ; and the question that naturally suggests itself upon this, is, have they any ancestral connection ?

Afghanistan has been, as Professor Lassen so truly says, (on the history traced from Bactrian coins,) so long the highway and the battle-ground of converging nations, that the flux and reflux of races, have obliterated the knowledge of eras, or epochs as connected with the people, the Pushtawuh, speaker of Pushtoo, or Pathan, whom the Persians termed Afghan. Prichard (Res. IV. ed. 1844) collates all the evidences respecting this people, whose tradition is that their origin was from Gur, or Guristan, and whom the earliest authorities recognize as extant in their present location. Their language belongs to the Medo-Persian branch of the Indo-European tongues (Ritter Erdkunde, 6. S. 205, 206), and their race is that of a nearly connected branch of the old Arian (Wilkin, Geschichte der Af.). The complexion of the Afghans, as Elphinstone was the first to observe, varies with their climate, the eastern Afghans being dark, the western fair as Europeans with black, brown, or red beards and blue eyes, a true Caucasian race as Blumenbach has termed them : in eastern Afghanistan fair and dark complexions again appear in startling contrast, just according as the habits

of men have led them, or their forefathers, to hold to the high and cold country, or frequent, for trade, or service, the low and hot lands, —"some dark as Indians," as says Elphinstone, and as, in their country, see we. The latest actual colony of Pathans in Hindostan is at Rampore in Rohilkhand; and, although a friend of my own, a native of the place, told me that he remembered as a child hearing Pushtoo, still spoken in the *zananahs* there, the process of becoming Indianised in appearance, as far as complexion goes, is with the male population going on rapidly. From all which we deduce that there is nothing to be surprised at in the physical fact, that an apparently northern race may be represented as *Indian*, i. e. dwelling near, on, or about the river Indus.

It is not evidently from an ethnological investigation, that we can hope to derive any knowledge as to antecedent races here; but the truth is we do not require it. Monumental evidence, as at Bood Bameean, where Burnes saw "the colours as vivid, and the paintings as distinct as in the Egyptian tombs," in the female figures encircling the mutilated giant-idol,—the eight miles of rock hewn habitations, (and if nomenclature be worth aught, the mountain Hindu Koosh towering above them)—the Buddhistic remains disinterred, the Buddhistic shrines still visited within our era by votaries, in Afghanistan,—point the route of the migration of the civilizers of India, the higher castes of Hindus, whom Blumenbach also classes with the north Africans, as Caucasian, and the traces of whose progress are to be found even in Makran,* where Hindu pilgrims still visit Hinglaj, one of the fifty-one spots where fell the severed limbs of Sati (Egn. *Seti*) or Durgá.

But if ethnology give no help in this quarter, it is far different with the tribes of Cashmere. In that secluded valley an independent kingdom existed up to the 13th century of our era; with the physical peculiarities of complexion, natural to the climate of a plateau, 7000 feet above the level of the sea, the people are not the less *Indian* as to the tracing of their Hindu origin, and, as has been already noted, the only *Indian* history of any authenticity, is that belonging to their land. But to deduce dates from it, or indeed to do any more than

* As. Soc. Journal, v. note by me, Vol. IX, p. 154. (No. 98.) I quote this merely on the question of extent of the migratory influence: the places pilgrimised to by Hindus, beyond the present spread of Hinduism are very many.—H. T.

merely approximate to the estimate of definite periods in the early history of Hindostan, in this stage of our knowledge appears impossible. The key to an acquaintance with this most interesting subject is beyond the limits of the land; from the first time I endeavoured to study in this matter, this conviction insensibly formed itself in my mind, and I think recent discoveries, to which I will allude more particularly, tend to prove its justness. If however, it were possible to identify the Bráhminical conquerors, moving at a period, just anterior to the events of the Great War, from "between the two divine rivers *Saraswati* and *Drishadwati*, the tract of land which sages have named *Brahmavarta*, because it was frequented by gods,"*—in these Rot-ñ-no of the monuments,—these रथिन: perhaps of their own Sanscrit,—these *charioteers*, the title in which they took pride, even like "Sátyaki the great charioteer" of the Mahábhárat,—we should have valuable corroboration of the present received, but hardly proved, opinion, that this movement took place from the sixteenth to the fourteenth century before our era.† The irrefragable testimony of monuments added to ethnological evidences not less strong, conjoin with what there is of history, and that description of grave tradition which recorded in the legislation of a people, has been at all times admitted to rank as history, and all combine to show us the quarter whence these conquerors came, the way they took, the spots at which they halted on their way to this country, which they enriched with their language, their literature, and such a description of unprogressive civilization‡ as their institutions admitted. I think we have been now able to *time* an epoch in their progress by finding them again in collision with their congeners of Egypt, during the era in which these went forth over many lands, avenging the insult of a long subjection by making themselves terrible as conquerors, or, as apparently with the Rot-ñ-no, valued as allies or protectors.

* Manu, II. Sl. 17.

† The peculiar four-spoked chariot of these people, has been recognized by Mr. Layard as represented at Khorsabad, as among the spoil of a conquered city. (Nineveh. Part II. c. VI.) I have in this present notice purposely suppressed minor points of identification.—H. T.

‡ I use this term as equivalent to '*civilisation fixe*' which Salverte at the commencement of his great work (Des Sciences Occultes) distinguishes from '*civilisation perfectible*,' as respects the practical application of things known.—H. T.

My twofold object in the above enquiry will have been easily detected as respects the bráhminical conquerors.

1. To recognize them *as migratory in the act of migration.*

2. To fix a date for this act *from other than their own chronology.*

Success in this object, suppose it attained, will put a stop to that mystery and idea of excessive antiquity, as respects India which has so long palsied enquiry; for learned mystery is the worst of foes to true knowledge. The rich field of Sanskrit literature has taught us, itself, but nothing out of itself;—nor did the reading of inscribed copper plates and stones give us for many years more than a certain amount of local information. It was not until the time of him, for whom, the more I study the works of others the more I feel I have but one word,—the admirable James Prinsep, that the decypherage of the unread Pali gave on the one hand a philological result, and established on the other the connection of India at a certain time, with a certain people or peoples beyond her limits. This is, for any fact, a complete proof on the two evidences, internal and external: this is what I want to carry out at a period a few centuries anterior. We know that the high castes of the Hindus are not aborigines: we know that they did not find their science and philosophy, in India: we know therefore that they brought these, or their germ with them: we know that their impulse as a nation was purely progressive, and that they obeyed this impulse even to Ceylon, to Java and the Laccadives, both which last we call by the names they gave them: but we are certain that they never, as a nation, went back with their science and philosophy to teach it to other men; on the contrary, although individuals visited them and brought away their doctrines (or said they did), the nation that held these, deserted, site after site, if it was not too much to say so, their ancient haunts, mention of which however, still lives in their mythological history, and whither still their devotees make long and painful pilgrimages. Now the process whereby we shall ever know any thing of this people,—what their acts and deeds in India,—must be by seizing some definite epoch, like Bunsen's Menophthah-era, and working upwards to their origin from it.

My conception, as to the Egyptians I have already given, as much the older and more energetic people, perfecting their system of life and polity in a particular site, and going back on their own traces to disse-

minate the fruits of their amended knowledge to other men. The acceptation of Bunsen's chronology, gives countenance to this opinion, and Layard's researches go to confirm it; but in addition to these a discovery still more curious and interesting as respects the immediate subject of our enquiry, helps to combine the real history of these ancient races, viz. that the language of the cuneiform inscriptions is Sanskrit!* This is due to the decypherage of the Behistun and other inscriptions, published by the Royal Asiatic Society in their Journal, Vol. X. Parts I. to III. These inscriptions had long attracted the attention of Major Rawlinson, C. B. (now Pol. Agent at Baghdad), who some years ago, while employed at Candahar, did me the honour to propose their publication in this Journal, which was then my property. It is I think fortunate that the publication of these most valuable and interesting relics should have been delayed until after such authorities as Lassen, Westergaard, and Dittel had examined and written on them, and an editor so capable as Mr. Norris of the Royal Asiatic Society, was found to superintend the bringing of them out. These three forms or dialectic differences, the Persian, Median, and Babylonian, of the language represented in the cuneiform writing, and by one of these, doubtless the inscriptions found by Mr. Layard will long ago have been interpreted. That is to say, that on the site on

* The able and enterprising copyist and translator of these inscriptions is a little given to the mystery of learning in this matter: he terms the language of the inscriptions "*the language*," without a name; and this is the more to be regretted, because to look upon it as something apart from Sanskrit, or any definite tongue, though grammatically obeying the construction thereof, invites to the fatal facility of arbitrary interpretation: for instance (Journal, X. III. p. 314 to 318), the window inscription, repeated eighteen times, in the upper side of the windows of Darius' palace at Persepolis is, after *four pages and a half of discussion* rendered—"Erected by Ardasta, the architect for the palace (or in the palace) of King Darius." Here is the inscription in Roman characters.

Arda-stána a-thagaina Dar(a)zaon(h)ush naga hya vithiya karta.
High-place un-covered (for) Darius king who (the) house made.

Major Rawlinson's reading which obtains a proper name (the apparent object) is made by putting *naga-hya* as one word, and leaving the last half out of the translation altogether: at page 345, he tells us "*thaga*" with the prefixed particle *a* may denote "building," *athagaina* being "a Mason," &c. &c.: this is an odd use to press the Sanskrit and Greek privative particle into! the words are *ustashanám áthaganám*: this sort of criticism is unfortunate.—H. T.

which he found commixed the graves and hieroglyphs of an Egyptian race, lying over the ruins of an Assyrian palace, the language of the cuneiform or arrow-headed character, occurring on slabs with a primitive form of the Indian *Lat* writing, and (apparently) the letters of some Phœnician dialect,—will have declared itself to be the classic tongue of the ancient conquerors of India. Are we about to see fulfilled the prediction of Vans Kennedy as to the Babylonian origin of Sanskrit, and the Hindu mythology,—or, in other words, are we not approaching the solution of the affinity between the Hindu and the Egyptian?

"Time sadly overcometh all things and is now dominant, and sitteth upon a Sphinx, and looketh into Memphis and old Thebes; while his sister oblivion reclineth semi-somnous on a pyramid, gloriously triumphing, making puzzles of Titanian erections, and turning old glories into dreams. History sinketh beneath her cloud. The traveller as he paceth amazedly through those deserts, asketh of her, who builded them; and she mumbleth somethiug but what it is he heareth not."*

So wrote two centuries ago, the great enquirer into vulgar errors; but those who sneer or doubt in these days as to the earthly limits of human enquiry, read their rebuke in the present refutations of a conclusion made then by even such a master-mind as his.

Descriptive notice af the District of Jhilum. By L. Bowring, *Esq.*

The district of Jhilum as at present constituted, extends from the Jhilum river on the E. to the Attock on the W. On the north it is bounded by the various tálukás of Ráwalpindí as the Pubbí country, Potwar, Syudkusran and Nurálí, the river Suán and Pindí Gheb; on the south, its limit is the Jhilum river as far as Dhák, whence it stretches due west, being bounded to the south by the districts of Khúsháb, Mittá, Tuwanah and Kuchi. In this extent of 130 miles, with a range of hills traversing the centre, it is natural that the character of the country should vary much; the ravine country to the north, the hills of the centre, and the fine fertile plains to the south, are well

* Fragment 'on Mummies,' by Sir Thomas Browne. Works, IV. p. 273, ed. 1836.

marked distinctions. But to give a better idea of the country, it is proposed to enter into a short account of each subdivision.

We shall begin with Rothas, which from its importance as the centre of a large tract of country, and as the key to the passage to the south, has been for many a century a place of note. The district of Rothas was subdivided formerly into 14 tracts. 1 Simli now Pudri and Jhangar, 2 Dhuralá, 3 Bárbukálá now included in Dhurálá, 4 Haveli now in Rajiv, 5 Rajiv, 6 Iskanderala, 7 Toliala, 8 Soliala now Pukhowal, 9 Terozala now Jhilum, 10 Akberpur Solimá now in Kala, 11 Shakirpur now in Kala, 12 Eesiala now Sungoi, 13 Shalijchuni now Khurd Chautálá, and 14 Pulliala on the opposite side of the Jhilum. This arrangement did not include what are called the Mundis, viz. Lehri, Sultánpur, Bhet and Dumeli, which have been for ages ruled by chiefs of the Gukkur caste. Under the Sikhs the denominations of the various divisions were altered, and each seems to have taken its name from the village, in which stood the principal fort. The town of Rothas is about 9 miles from Jhilum, the river Kuhan being crossed 3 or 4 times on the road. The town is inside the fort a vast structure, half a mile in length, and one quarter in breadth. It was built by Sher Shah Lodi, who for a brief period expelled Humayoon and ruled the Moghul empire. Several works of utility bearing his name are found in the Punjab, as for instance, the wells with covered steps in the road from Khushábs to the Indus. The fort was built 320 years ago, and has stood out time bravely. It covers the face of the high rock, near which passes the road from Bukrála. The gates are the Sohal, the Khwáskháni, Lungarkháni, Moti, Gutiáli, Parpulwáli, Tuláki, Cábuli, and inside, the Shah Chandwálá. Of these the Sohal is a handsome structure, 60 ft. high, built of sandstone with a fine spacious apartment above. The Lungarkháni and Khwáskháni gates, which are the most accessible have witnessed many a desperate combat. The district of Rothas was at the time of its conquests by the Sikhs in the possession of the Gukkurs, from the chief of whom, Noor Khán, it was wrested by Ranjit Singh, and bestowed by the old lion on Mohar Singh Lambá, one of his oldest comrades in Jageer. He was succeeded by Gurmúkh Singh now a white bearded old man, and the most ancient Sirdar probably in the Panjáb. Subsequently it was leased to Golab Singh, Misr Jussá Mull,

father of Rájá Lál Singh, Shekh Emám-oo-deen and Rájá Lál Singh, and was latterly managed by Misr Roop Lál. The former assessment of the Rothas district was 40,000, which was subsequently raised to 60,000. The present division is into 4 tuppehs, viz. Rájá Iskandarelá, Dhuralá and Toliálá, and 4 mundis, viz. Lehri, Sultánpur, Bhet and Dumeli. The mundis have till recently been assessed as a whole, the jummah of each village not being defined, and the revenue for the mundi being collected by the Gukkur headmen.

On the brow of the hill towards the Kuhan river adjacent to Rothas is a fine Khangah, said to be that of a Pír named Sháh Jamál; and built by Shah Jehan, who also erected the Serái on the other side of the stream. From Rothas the common route to Bukrálá winds along the course of the Kuhan to Udrana in tuppeh Dhurálá and thence to Bukrálá.

The last chief of Rothas, Rájá Fazl Dud Khán joiued Sher Singh during the rebellion, he obtained from the latter assessment of the district of Rothas in Jageer as the reward of his service. From Rothas a road leads straight to Bukrálá by Chaukoa where is a fine tank built by Golab Singh. Bukrálá is a small village, or rather mundi, containing several small villages of which Bukrálá is the chief. The country round is a mass of hills, and the road very difficult. It was here that Dost Mohummad advised Sher Singh to hold out, and try his fortune in a second encounter. The headmen here, as at Rothas, are Gukkurs, and look upon themselves as of good family. Six kos east of Bukrálá is tuppeh Lehri, a strange little hilly district, the inhabitants of which bear a bad character for turbulence and ill faith. Their behaviour during the late campaign was conspicuously bad. From Bukrálá there is no camel road to Lehri, which is consequently very inaccessible. From the hills near the principal village the white fort of Mungalá, on the opposite side of the river Jhilum, seems quite close, and the district is one of the first which Golab Singh took possession of, the Zemindars still showing the rock which he ascended to survey his new conquest. Immediately east of Lehri is Sultánpur, a small mundi, only a few villages on the right bank of the Jhilum, and south of which lies tuppeh Tolialá. Proceeding west of Bukralá, one arrives at Dumeli six kos, a fine town of 500 houses, with a good bazar, situated on the river Kuhan. It is one of the most flourishing

towns in the Rothas district. The headmen here also are Gukkurs, and relations of Rájá Fazl Dud. The fourth mundi Bhet lies immediately under Mt. Tillah and is comparatively insignificant.

Jhilum the present head-quarter of the district, where two regiments of infantry are now stationed, was not considered of much importance during the time of the Sikhs. The present cantonment is about a mile W. of the town, bordering on the village of Saierla to the W.; to its south, runs the river Jhilum at a little distance. A little N. W. of the town is a mound of some extent, supposed to have been the site of one of Alexander's cities. Some coins of Menander, one of the later kings have been discovered there, and it is said that some years ago Golab Singh dug out a great number which he forwarded to Ranjit Singh. Jhilum when planted and in the possession of good roads will in all probability be a favourite station. The rapids of the river, about 4 miles to the east close to the village of Pakhowal, are very picturesque. About 3 miles from Jhilum is Kula a town of 500 houses.

On the road from Jhilum to Jelálpur, 7½ miles from the former place, is the town of Sungöi, the former residence of Rájá Lál Singh's family. The district was held in Jageer by Midh Singh Bhudániá, who first conquered it iu the time of Ranjit Singh. A fine pukka fort built by him stands near the town. Sungöi is on the whole, the richest district in the Jhilum tehsil, the land being situated on the bank of the river. Ten miles west of Sungöi is the celebrated hill of Tillah. This very remarkable mountain is of some antiquity, being known in old writing by the name of Bál Gundái. At present it is the residence of the followers of Goraknáth, but the mouutain is commonly known as the Jogis' hill. The ascent is long and wearisome, but the view from the summit very fine. At the top of the hill are 2 or 3 tanks, one of which contains superior water, but another built by Chand Koañr, the mother of Naunehál Singh proved a failure. The fakeers have large herds of cattle and possess also one or two villages in Jágeer: once a year a large festival is held at the top of the hill. The sect bury their dead. The view from Tillah commands the Garjak, Kúsak, Kuringili, and other hills. In the ravines of this mountain is found a species of the wild sheep called by the natives 'Ooriál;' and a species of osprey builds its nest in the higher peaks. Although Tillah is the head-quarters of the Goraknáth sect, there are several

other places, as the Sindh-ságar Doab, which are resorted to by them, the principal being Ráwalpindi, Pindi Gheb, Kotsárung, and Mukkad on the Indus. Adjoining the Tillah Range is the small district of Nárá, called by Lál Singh, Rámpur, in the principal village of which he built a fort called by him Rámpur, in a badly conceived situation commanded by an opposite hill. Though unfinished it cost 15,000, and is now falling to ruin. The headmen are by caste Januyán. The range of hills which runs from Rothas to Tillah, and thence by Nárá terminates at the Búnnáh river, on the opposite side of which stretches the salt range proper, which commences at Dárápur and extends to the Indus.

Two kos west of Sungöi is the small district of Chautálá, formerly a Jageer of Dul Singh Káliwálá. Between this and Dárápur one crosses the Boonnáh stream, which in the cold season is perfectly dry, the sandy bed extending a mile and half in width. In the rains after a heavy fall, the stream descends with such rapidity as to carry away either man or beast in the current.

The district of Dárápur contains no village of note. Opposite Dárápur in the left bank of the Jhilum is Kasúl, south of which lies the jungle in which was fought the battle of Chelianwálá. After the battle a great number of Sikhs fled across the river, and were drowned in the stream.

Between Dárápur and Jelálpur the hills approach so closely to the river, that there is barely room for a horseman to pass, indeed in the rainy season this lower road is shut.

Jelálpur is a place of some importance, being much frequented by salt and grain merchants, who take these articles across the river to the cantonments of Lahore and Vazírábád.

The town of Jelálpur was found by Jelál Khán and is of modern date. The old town was called Gurjakiá, from a lofty hill at the back of the town of the same name, named the Gurjak or the windy hill. The district of Jelálpur was wrested by Mahá Singh, Ranjit's father from Dewán Khodá Baksh. After its conquest it was given in Jageer to Ratan Singh Gurjakiá, lately deceased, who held it for 25 years. He was succeeded by Sirdar Gurmukh Singh Lambá, and more recently it was held by Rájá Goláb Singh and after him by Lál Singh. The above districts are comprised in the Jhilum Tehsil, of which the following is an analysis.

District.	*No. of villages.*	*Revenue.*
Rothas.	171	50,000
Jhilum.	16	9,500
Kálá...	55	20,000
Sungöí.	22	20,000
Chautálá.	5	10,000
Nara...	11	5,000
Pakhowal.....	28	10,000
Dárápur.	26	12,000
Jelálpur.	23	12,000
Pudrí.	9	4,500
	366	1,53,000

In addition to the above are 19 villages in Jageer valued at 6000 yearly.

The routes in this tehsil are—I. from Jhilum to Rothas 9 miles, from Rothas to Udráná 9 miles, and from Udráná to Bukrálá 9 miles, or by the direct road from Rothas to Bukrálá 10 miles. II. From Jhilum to Chautálá 10½, from Chautálá to Dárápur 10½, and from Dárápur to Jelálpur 9 miles. A camel road also leads from Rothas directly westward, viz. Pudri to the Ghorigullá pass, through which the Sikhs used to bring their guns from Jelálpur to the level plain of Dhani on the further side.

The tehsil of Pind Dádan-khán comprises the following districts: 1 Jalub, 2 Jhangar, 3 Pind Dádan-khán, 4 Ahmedábád, 5 Kuhan. Jalub is a fine fertile tract extending from Jelálpur to Pind Dádan-khán, containing some large villages. The chief town Dehrialá contains 500 houses, and is midway between Jelálpur and Pind Dádan-khán. The district was wrested by Ranjit Singh from the father of the present headman Rájá Ahmed Khán who enjoys a small Jageer. There were 4 subdivisions, Jalub, Phuphrá, Pinjan and Punjain, of which at present only the first two exist, Jalub containing the villages towards the river, and Phuphrá those towards the salt range.

The hilly district of Jhangar contains 35 small villages, dispersed among the hills, and extends from Jelálpur to Kutas, being bounded on the S. by Phuphrá and Pind Dádankhán. It contains some remarkable hills, Chambul, Kusak, Mukhyálá, Kuringili and Drengun.

Four miles N of Dehriálá in Jalub is the village of Baghánwálá, midway between which and the Búnnah stream, on the sides of a ravine, coal is found of good quality ; but the position being very inaccessible it is not probable that it could ever be worked, although the coal is superior to that found at Khyúrá and other parts of the range. About a mile from the village are the remains of a fort of some antiquity which in the time of Ranjit Singh belonged to Mallik Kádir Baksh, who was expelled, and a Sikh Thanna stationed there. In the fort is an old mosque in ruins, and adjoining a small tomb of red stone, bearing an Arabic inscription and said to be that of a certain Hans Gházi. Close by is an old Hindu temple, resembling that at Kutas, the architecture of which is very primitive. It is built of limestones which contain numerous petrifactions of leaves. The caste of the headmen of Baghánwálá is Januyán, which is apparently the prevailing caste among these hills. West of Baghánwálá in the centre of the hills, is the stronghold of Mukhyálá, in former days a fort of considerable strength which was razed by the Sikhs. The place being very inapproachable, the hillmen defied for a time the power of the Khalsa. The hills of Mukhyálá, Kusak and Kuringili were held by three relations, Sultan Sarfráz, Sultán Mehdi, and Sultan ?, who, descending from their mountain fastnesses, were in the habit of plundering travellers and the peaceable inhabitants of the plain. The present headman Sultan Nizábat Ali joined Sher Singh, and committed various excesses during the insurrection. South of Mukhyálá is the fort of Kusak, situated on the summit of a high peak standing forth out of the mass of hills. Three sides are inaccessible and the fourth which is sufficiently steep, is protected by a strong wall girding the hill. At the extreme top is a small white temple which is visible from a long distance. For many a month this fort held out against Ranjit Singh, the garrison being supplied with water from a tank in the place, while they laughed at the impotent efforts of the Sikhs. But the water failing, their chief was compelled to surrender. Strange to say, on the evening of the day upon which he came in, torrents of rain fell, and again filled the tank, but being a man of honour, he kept to his word and gave up the fort.

To the N. W. of Kusak is Kuringili a hill of very great height and remarkable appearance. It is chiefly noted for the antimony

which is found at the summit in small cubical bits, on the southern peak. The Zemindars who search for it, let themselves down by a rope over the face of the precipice and pick the mineral out of a hole beneath in the side of the rock, in which perilous adventure some unfortunates have lost their lives by falling down the cliff, a height of 5 or 600 feet. On the northern peak are the remains of an old fort, which was destroyed by the Sikhs, near this is a hole 2 feet in diameter, descending perpendicularly into the hill, concerning which a curious legend exists. It is related as follows.—In Cashmere lived a Saint named Makhdúm Jhanián, who one day disappeared from the hill on which he resided, and some time afterwards made his appearance on the top of Kuringili, having traversed the intermediate country under ground, and made his way upwards through the heart of the hill. On the Pír's arriving at the summit of the hill, which was then inhabited by Káfirs, he proceeded on to the village now known by the name of Makhdúm Jhanián, and containing the tomb of the saint. Here the people opposed him, upon which he prayed devoutly, and the whole village, being subverted by a miracle, was buried in ruins. On throwing stones down this hole they appear to fall a distance of 40 ft. and more. Some years ago an adventurous Zemindar descended with a lamp, but in a short time returned iu a fright, declaring that he had seen the traces of the Pír's feet, upon which he lost courage and got himself drawn up again. Adjoining Kuringili is a high hill called Dreugun or Chel, which is the highest peak iu the salt range save Mt. Sikesar being considerably more lofty even than Kuringili. It is well wooded, and in the thickets which abound in it, hawks are caught in some numbers. Next to Drengun is a long hill called Diljabbá which terminates at the Ghorigullá pass.

Four miles S. S. W. of Kuringili is the hill fort of Dilur, a place of some strength commanding the route from Pind Dádan-khán to Chakhowal. The ascent is rather precipitous, but the want of good water makes it of less importance than it would otherwise be. It was built by a certain Bairu Khán.

The descent from this to the little village of Choyá Saidán Sháh is very rough and troublesome. On the road is a large stone called Saidán Sháh's stone, at the most difficult point, where the path narrows considerably, and for a horse, is almost dangerous. To this travellers

pay reverence salaming to it and saying 'show me the way, oh! mother.' Choyá Saidán Sháh is a very picturesque little place embosomed in hills, with a clear stream of fresh water flowing through it, which abounds in fish of the mahsir species. This rivulet escapes from the pool at Kutas, which is about 2 miles from Choyá and passing by the salt mines of Mukrach, loses itself in the level plain to the south. Choyá is said to be the coolest place in the country in the hot season, which is owing to its protected position and the number of fine trees which skirt the side of the mountain stream. From Choyá two roads lead to Pind Dádan-khán, one by Dundot, the other by the salt mines of Khyurá, the former being that frequented by camels, the other route being very rough and difficult. Dundot is a small village in the summit of the range, commanding a fine view of the country round.

The district of Pind Dádan-khán or more properly Khokar comprises only 4 villages. Of these the chief is Pind Dádan-khán, a large town containing 4000 houses, situated about a mile and a half, from the Jhilum and 4 miles from the salt range. The inhabitants are chiefly Hindus and engaged in the salt trade, the only manufactures being 'bechobáh' tents, woollen namdáhs, and a few other articles. The town contains a large mud fort with one or two good rooms in it, but nothing else worthy of mention; and is a straggling place consisting of three separate towns, which have in the course of time been amalgamated, under the common name of Pind Dádan-khán or Dádan-khán's village. The salt mines have been worked for ages, but we have no authentic account of them before the time of Akbar, whose rates of hire for carrying and loading still prevail. The following are the principal mines commencing from the eastward; 1 Jutáná, 2 Khurá, 3 Khyurá, 4 Mukrách, 5 Sardi, 6 Sur, 7 Niláwán, 8 Choyá, 9 Varchá and 10 Kalabágh. The best salt is extracted from Khyurá, Sardi and Choyá, the largest of all the mines, being that of Khyurá where there are 8 shafts, viz. Buggi, Sujwálá, Mukhad, Matwálá, Phurwálá, Chenganwálá, Trudde and Fakirwálá; the principal of which are the two first. The Buggi shaft is of regular structure and contains first rate salt, but the Sujwálá is the most remarkable and the largest; it is however, rather dangerous, the roof sometimes falling in. The entrance is by an irregular descent, and the distance to the place where the miners are at work about 250 yards, but the shaft extends much further.

The vault where the mineral is dug out, is a mass of salt above and below and on all sides, the crystal being hewn out of the rock, in large masses by pickaxes, and carried out of the mine by manual labour. The roofs of the mines are covered with stalactites of fantastical shapes. In the time of Ranjit Singh, the mines were under the superintendence of Rájá Goláb Singh, who managed them for many years. He was succeeded by Misr Umir Chánd, a half brother of Rájá Lál Singh; In 1904, Dewán Mulráj obtained the lease of them, and in 1905, Misr Kallu Rám, one of the oldest and most respectable officials in the Punjab. The former rate of salt was 1½ Rs. per maund, the seer of the mines being 114 Rs. weight. The price was raised in 1905, to 2 Rs. per seer, and has since the annexation of the Punjab been raised to 2 Rs. a maund, the seer being of 80 Rs. Formerly the byápári obtained some further advantages, by certain reductions callad 'choot and gularvat,' the former being a percentage allowed on the quantity of salt bought, and the latter a reduction made on account of the loss sustained by melting. The miners receive 5 Rupees per 100 mannds for the salt conveyed by them to the mouth of the pit, and when the shaft is in position not accessible by cattle 2 Rs. per 100 maunds, for conveying the salt from the mouth of the pit to the village of Khyurá: a further sum of 4 Rs. per 100 maunds was charged to the byápári, for conveying the salt on bullocks to the mundi at Pind Dádan-khán; but the byápáris now carry it away themselves. It is said that in the time of Akbar, 12 lacs of maunds of salt were extracted from the salt range, and the rate being then 2½ Rs. a maund, the revenue derived was 30 lacs of Rupees.

The camels employed in the carriage of salt are reared chiefly on the 'Thul' country of Ahmedábád, and the sandy tracts of Mitta Tuwánáh, and Kuchi to the southward. Upon these camels a grazing tax called 'trini,' is levied of 2 Rs. a head yearly, the gross amount settled on each village, being paid by the chief men of the 'Koris' or herds. In some parts of the Punjab, the revenue derived from this source is very great, the 'trini' of Kot Kumáliá and Syudwálá in the Recháb Doab, being above 50,000 Rs. yearly, in the time of the Sikh regime, and the single town of Núrpur Tuwánáh paying more than 7000 Rs.* The mines now worked are Khyurá, Mukrách and Surdi, the

* N. B. The cattle used in the salt trade are called by the local name of 'láshia.'

others being shut for the present. The Khyurá salt which is produced in endless quantity, is carried chiefly to the southward; that of Surdi finds its way to Cashmere, while that of Mukrách is carried to the northward to the Hazára country.

The salt of Kalabágh is conveyed to Mooltan and the Deráját, while that of Kohat on the other side of the Indus, is used in Afghanistan. This latter however, is of very inferior quality, being black in colour externally and very course. It is extremely cheap however, averaging only about 2 annas a maund, but the Sikhs never permitted it to be taken into the Punjab.

Ahmedábád is a large district bordering on Pind Dádankhán on the east, and Khushab on the west, the greater number of the villages lying along the banks of the river, but some of the largest being situated in what is called the 'Thul,' or the flat country towards the hills, where extensive crops of bájrá are raised. This tract is however, almost solely dependent on rain. The town of Ahmedábád contains about 400 houses, and is much frequented by grain merchants, who convey the wheat and grain of the Dhuni country by this route, to Háfizábád on the other side of the Chinab; near the town are a series of high mounds of gravel, which are to all appearance an offshoot of the salt range. The place is called Burárią, and has the reputation of being the site of an old city. Excavations made near the surface, have discovered the foundations of several houses, the chunam used in building which is of great thickness, more resembling brick than chunam. A great quantity of copper coins, beads, pieces of iron, bits of gold, &c. have been recently found also; but nothing to indicate the origin of the place. By the natives it is asserted that it is the ancient Bhadráwati mentioned in the Mahábhárat, as the residence of the Rájá Jobnath, during whose reign the Pándavas made a sally on the city, and carried off his favourite horse to complete the 'aswamedha.' I believe, however, that the true situation of Bhadráwati was near the Chenab; but the story of the Pándavas, having sojourned on the salt range is universally believed in. A hill called Dhurimári near Baghánwálá, Kutas and Mt. Sikesar are all cited, as having been in turn the abiding places of the persecuted Pándavas. The original holder of Ahmedábád was the father of the present headman, Rájá Khodá Baksh.

The district of Kuhan is chiefly known as containing the celebrated Kutas. This pool though picturesque and of old fame, can scarcely stand a comparison with its rival at Ajmere, the other eye of the world. It issues from several clifts in the limestone rock, and is of a circular shape whence the name Kútáksha, about 30 yds. across either way, and is in some places of very great depth, so much so, that the holy men assert it to be unfathomable. The stream after issuing from the pool pursues a winding course to Choyá Saidán Sháh, through a highly picturesque valley. The pool is surrounded by temples and Thákur Dwáras, the principal being those of bairágis, who here, as elsewhere, are not on very good terms with the Sannyásis. The Thákur Dwáras owe their origin to the piety of the principal officials of Ranjit Singh, Goláb Singh, Misr Beli Rám, Dewan Múlráj and others, having each in this way erected a monument to commemorate their virtue. Goláb Singh in particular was very fond of building religious edifices at other people's expense. West of the pool is a temple believed to be of very great age, and ascribed to the time of the Pándavas. It is built of limestone containing numerous petrifactions, in the 'Khel' style of architecture, which consists of a narrow passage inside the outer wall, incircling a second inner wall, within which is a small compartment. This is continued through two stories, and the building is consequently very compact and solid, and may doubtless have existed for many centuries. The great festival here is held in the month of Baisákha, when numerous pilgrims assemble from all quarters. The 'jajmán' books of the principal officiating priests, contain the names of all the chief personages of the Punjab. The Jhind Rájá, Rájá Dinánáth, and all the Sikh Sirdars of the country, have in turn inscribed their names in these interesting volumes.

The village of Dulwál contains a very fine house built by Misr Beli Rám, who was murdered in the time of Hírá Singh. Dulwál is generally known as the Kánúngöi's village, this family having for centuries held that office in the district of Kuhan.

Annexed is an abstract of the above districts, which comprehend the Pind Dádan-khán Tehsil.

Districts.	*No. of villages.*	*Revenue.*
Jalub, ...	41	55,000
Jhangar, ...	33	15,000

Khokar, ...	4	12,000
Ahmedábád, ...	51	72,000
Kuhan, ...	12	24,000
	141	1,78,000

In addition to the above are 8 villages in Jageer, valued at 10,000. The Tehsil of Chakhowal, comprises the Tálukás of Dhuni, Syadpur, Doman, Hasdá and Gurhá.

The district of Dhuni Chakhowal comprises the following subdivisions, Bubrál, Haveli, Kuhastáni, Chowperá, Bádshákháni and Karpuwal; and contains 138 villages. Tradition says that the emperor Báber, who is reported to have resided for some time at Kallur Kuhár, observing the uncultivated condition of the plain of Dhuni, and the capabilities of the soil, sent for a certain Rájá Mull from Jammú, who took up his abode at Mullot in the salt range, and subjected Dhuni to the plough. Accordingly a host of men from the hills settled in the plain, the principal of whom were Vír, Múríd, Chukku, Kuran and Muthá, the five sons of Sidhur, and the district acquired the name of the Vír Patti; the táluká of Syadpur, being called the Lundi Patti or the rogue's strip, that district being a narrow strip of land skirting the Drengun and Diljabbá hills. The three principal castes of Dhuni are Mair, Kusur and Kahutá which claim for themselves a Rajpoot origin. Of these the Mair are chiefly settled in Haveli and Rupuwal, the Kusur in Chowperá and Bubrál, and the Kahutás in Kahutáni.

Dhuni formerly consisted of 84 villages, as did also Pindigheb. The holding of land is curious. Throughout the whole of Chakhowal the villages are divided into 'asámis' or land estimated at 360 Punjabi beegahs more or less, and assessed at from 100 to 300 Rs., 150 being the general average. Thus every village is said to contain 3, 4, 5, &c. asámis, and the rate of each being ascertained, the assessment of a village is simple enough.

Chakhowal is a large town, containing 1200 houses, but though healthily situated, is a desolate-looking place, being in the centre of a dead plain, and surrounded on all sides by ravines. The land is however very fertile. The Chawdhuris or headmen of Chakhowal,

formerly possessed great influence in the district, and held large Jágeers. During the rebellion they went over at Mooltan with Sher Singh, and then proceeded to Dhuni to plunder the country. On Mrs. George Lawrence passing through, they stopped her and compelled her to return, demanding a bribe of 1,000 Rs. as the price of allowing her to proceed. For this act of treachery they were imprisoned by Major Nicholson, but contrived to make their escape from his custody during an affray which took place between that officer's troops and the Khabris of Mïani. After the annexation all their Jageers were as a matter of course confiscated. The other large towns of Chakhowal are—Bhon a place famous for its bráhmans ; Kuriálá near which is the source of the Bunnah stream, which flows through the Ghorigallá pass, towards Dárápur ; Dudhiálá, a large village containing a number of Sikh residents chiefly old Ghorcharhás ; and Bádsháháni. The Dhuni breed of horses is now nearly extinct. Syadpur is a recently confiscated Jageer, which belonged to Kanh Singh Majitiá, one of the officers in the Peshawar force. It had been in the possession of the Majitiá family since the time of Mahá Singh, and U'ttam Singh uncle of Kanh Singh, did much to improve the town and cultivate the district, where his name is deservedly popular. The district is commonly called the Lundi Patti, it being said that a certain munshi managed to conceal the existence of this cultivated land, and collected the revenue on his own account, from which circumstance it acquired the name of the 'rogue's strip.' The town of Syadpur contains a well built mud fort, with two bastions and four dam-dammas. The town is immediately N of the Kuringili hill. Trees are very numerous in the vicinity, and are the property of Government.

Doman is about 5 miles N of Syadpur, and is of little importance except as being on the high road to the Ghorigallá pass.

It contains a small fort built by Joy Singh A'táriwálá, and it was in this, that Major G. Lawrence, was for some time confined.

It is also remarkable as having been the birth-place of Sher Singh, This district was for many years in the hands of the A'táriwálá family, and latterly belonged to Chatar Singh.

The district of Hasolá, which is also a confiscated Jageer of Chatar Singh's borders on Syad Kusrán and Nuráli in the Ráwalpindi

zillah. The town of Hasolá is of tolerable size, but the district is barren, being much cut up by ravines. The fort at Hasolá was built by Jaya Singh, who fled to Cabul, during the time of Ranjit, having incurred the old lion's displeasure.

In several parts of the Chakhowal Tehsil, gold is found in the rainy season in the numerous streams which flow from the salt range to the north, the rate at which the 'drúns,' as they are called are assessed, being 5 Rs. a year. The drún is like a small punt boat open at the smaller end. At the upper end twigs of trees and grass are placed, upon which is deposited the dark sand containing the gold particles. Over this streams of water are dashed continually, and while the lighter sand escapes at the small end of the drún, the heavier containing the gold remains at the bottom, whence it is afterwards removed and again sifted in a kind of concave platter called a 'patri.' The number of drúns on the Chakhowal Tehsil is 53, and the amount levied yearly 225, but the gold is not of such fine quality as that found further west. The occupation is not much in vogue now, in consequence of the light land assessments, but in years of scarcity the drúns are worked with great assiduity by the poorer class of people.

At Mukhad on the Indus, the drúns are very numerous, and the sum formerly levied from this source exceeded 500 a year. One man in two days collects enough gold to form a small pill, the Government taking at Mukhad a fee of 3 Rs. per tola, the gold afterwards selling at 15 Rs. or rather more.

The above districts form the Chakhowal Tehsil of which the following is an analysis.

Districts.	*No. of villages.*	*Revenue.*
Dhuni, ...	138	1,40,000
Syadpur, ...	44	20,000
Doman, ...	27	10,000
Hasolá, ...	18	16,000
Gurhá, ...	13	5,500
	240	1,91,500

Gurhá is a small district, a confiscated Jageer of Surat Singh Majitiá to the east of the Ghorigallá pass.

Besides the above villages, there are 12 in Jageer valued at 4000.

The Tehsil of Tullá-ganj comprises the following tálúkás. Kullar, Kuhár, Nurpur Suhuti, Tullá-ganj, Jabbi Résh, and Pakar Namal. The district of Kuhár lies to the west of Kuhan, the road leading through a fertile plain. It was formerly held in Jageer by the celebrated Sirdar Hari Singh Naluá, who built a fort on a hill, at some distance from Kuhár, in which several state prisoners have been confined. The chief village Kuhár is most beautifully situated, at the edge of a salt lake, three miles in circumference, which is covered with water-fowl. From a cleft in the hills to the rear issues a spring of warm water, which flows through the level sward, wooded by fine trees, in which strut about hundreds of peacocks. On the summit of a neighbouring eminence is the Khangah of the tutelary saint to which, it is said, a leopard resorts every Friday to make his salám. The whole appearance of the place is very picturesque, so much so as to have charmed the emperor Baber, who is said to have resided there for 6 months, and the Zemindars point out still a large boulder, in which steps are hewn, which they assert to be the seat from which he used to contemplate the attractive scene before him. From the high hills behind Kuhár is seen the level plain of Dhuni to the north, a road leading from Kuhár to Chakhowal viâ Bhon, and another to Tullá-ganj viâ Bharpur, while a third path through the hills to the S. W. conducts one to Nurpur. At a distance of some miles from Kuhár, is the hill fort of Mullote now in ruins, said to have been built by the Rájá Mall who first cultivated Dhuni. It is situated on the southern edge of the salt range, and midway between it and the village of Dundot, are the salt mines of Mukrách formerly mentioned. The mines of Surdi, which is a village in the district of Kuhár, are celebrated for the goodness of the salt extracted which is conveyed in large quantities to Cashmere. The salt vies with that of Khyurá in fineness, and is of a very beautiful transparent colour. The Surdi mines are approached by a large gorge, which seems to be a distinctive feature, the salt being almost invariably worked in the gorges of the hills, where it is apparently best and most easily extracted. The district of Nurpur Suhutti presents nothing worthy of note, save the salt mines of Nilwán, and those of Sur which are at present shut. In a valley formed by the rocks on either side, are the remains of what

was once a fort. Salt lies here on the surface, and used to be frequently abstracted by the zemindars, who are of the troublesome caste of Awán. This stubborn race is to be found chiefly in Nurpur, Tullá, Pukár and the Jageer districts of Sone and Khubakki, whence it runs westward till it is encountered by the Pathans on the Indus. Coal is found at a village called Bhúl, but is not of good quality. In the hills between Nurpur and Kuthá, the mountain sheep above alluded to is found, and is known by the natives as the 'úriál.' It is found generally in the salt range from Mt. Tillah to Mt. Sikesar; but is apparently seldom met with, being either very scarce or very shy. The body of the animal resembles that of a deer both in its contour and in the colour of the hair; the head however is like that of a sheep, and is adorned by splendid horns resembling those of a fighting ram, but much larger. The horns are 12 inches long, and have some 25 annulations. The ears of the animal are about 4 inches long, and from the chin on either side depends a bunch of coarse black hair, 4 inches long, like the beard of a goat. A streak of similar hair runs along the chest which is white. This animal is probably a new species.

Nurpur Suhutti was in former days a Jageer of Sirdar Jodh Singh Bhangu.

Tullá-ganj is a rich fertile district resembling the plain of Chakhowal, of which it is in fact a continuation, being about 24 miles west of that place. It was formerly a Jageer of Dhuná Singh Malwe, one of the oldest and most respectable Sikh Sirdars, but was confiscated by Rájá Lál Singh, during his Vizárat among his other remedies for patching up the state. The land being light, gram is grown in great quantities here, as in Chakhowal, and is carried south to the cantonments of Vazirábád and Lahore. In fact this plain of Dhuni is emphatically the gram country of the Punjab.

The town of Tullá contains 600 houses, and is flourishing. The Zemindars are Awáns and very turbulent.

In the streams of this district, gold is found in some quantity, especially in that of Gambhir, the gold of which is very good. The total number of drúns varies, but may be estimated at 50, the assessment on which is 100 yearly. From Tullá a road leads to Nurpur Suhutti viâ Chenji through the hills. An offshoot of the sect of Gorak-

padas reside at Kotsárang in the Tullá district, and profess to have been settled there for some time. The whole of the sect meet however at the Phálgun festival on the summit of Mt. Tillah.

The district of Jabbi Resh lies on either side of the river Súán the Suánus of antiquity, a part of the district of Pakar Namal intervening between it and Tullá-ganj.

Jabbi may be called the boundary of the Panjábi race, the country beyond being solely inhabited by Pathans, speaking Pushtoo, and calling their neighbours the people of Hind, in contradistinction to themselves. Jabbi was a Jageer of Sirdar Gundá Singh Mattu, from whom it lapsed to the government in 1904. The villages on the farther side of the river, border on the hills of Nurrá with the inhabitants of which the Jabbi men have been at constant feud. The Nurrá people are a soldier-like race, good marksmen, and possessing good horses, and have made themselves a thorn in the side of the Panjábis. Their little domain is wild and very inaccessible, but is capable of being well cultivated. Similar to Nurrá is the tract called Shaikel in the fork made by the junction of the Súán with the Attock, the inhabitants of which have a bad character ; they were in the habit of plundering travellers on their road to Mukhad, and escaping to the hills. Shaikel contains three small tuppehs, viz. Kazzú, Gulbegi and Alikhán, each of which is subdivided into several small hamlets. Each plough pays 1-5 on the spring, and 8 annas on the autumn crop to Mallik Alliyár Khán of Kálabágh. The Wans Súán villages of the Jabbi district have recently been transferred to Ráwalpindi.

The gold found in the Súán river is of good quality, being of a rich yellow colour, whereas that of the Indus is of a pale dirty colour, and is called by the natives 'suféd.' The total number of drúns worked is 60, producing a revenue of 140 yearly. The zemindars of Jabbi are Awáus and turbuleut, opposite to the village of Nikki on the other side of the Attock is the dark peak of Dinghot, where some old ruins exist, and the headmen of Kálabágh, Mukhad and other places profess to be of Dinghot descent.

The district of Pakar Namal is of great extent, bordering on Tullá-ganj on E. ; the Attock on W. ; the Jabbi district on N. ; and the salt range on S. It contains some very large villages, such as Namal assessed at 8,500 ; but they are few in number, and present a singular

contrast to those of Chakhowal, which are numerous, and still more so to the country in the Jhilum tehsil, where a village encounters one every few hundred yards. Dhoks so called, or little hamlets, are however rising up and with the spread of cultivation will doubtless increase in number.

The range of hills which extends from Namal to Mári opposite Kálabágh is called Majúch. Kálabágh not belonging properly to this district, it is unnecessary to enter into any description of its various products, its salt, its alum, and its dying materials. Mári contains some remarkable temples of apparently the same era as that at Kutás. In the Majúch hill near the village of Jabu, and about 8 miles east of Mári sulphur is found in some quantity, and also petroleum called by the natives 'lalidá,' which is used by them in lieu of oil. Namal is situated in a recess of the hills, which in the neighbourhood are of great height, but of little width, a camel road leading across to Músakhel on the southern side, a distance of about 4 miles. Músakhel is in the district of Kuchi which together with Pakar Namal was in former days held in Jágeer by Rám Singh Beli. The hills about Namal are a flinty limestone, and on their summits contain numerous fossils. Flints are found in great abundance, and were formerly collected in great numbers for the use of the Sikh troops. About a kos from the village, coal is found at the bottom of the ravines of pretty good quality, but in difficult positions. The substance called Ról from which alum is made, and which has an astringent taste, is also found, as also salt, sulphur in small quantities, and Khái which is used in dying. The sulphur issues in a decomposed state from the rocks, and gives a chalybeate taste to the stream of clear water, which here flows through the hills, and which receives from it a yellow colour.

It is reported that copper has been found in small quantities on these hills. The account is either false, or if true the place has been concealed or forgotten. It is not however improbable, that in the vast mass of hills which stretches S. E. from Namal to a distance of 6 kos, and which is little frequented from its barren nature, copper may be found. This range known by the name of Sikesar is of very remarkable appearance, and will be alluded to presently. Adjoining the district of Namal to the east in its southern part is the Chachi Jageer consisting of 13 villages, the principal of which is Láwá. The

zemindars of Namal and Láwá are all Awáns, and the fathers of turbulence, having been accustomed from time immemorial to wage a constant war with their Jageerdárs, not unfrequently getting the upper hand. Some 15 years ago the men of Láwá refused to pay their revenue to Sirdar Uttam Singh Chachi, who proceeded with his horsemen to exact payment. The zemindars resisted him by force of arms, and a skirmish ensued, which lasted all day and terminated in the evening, by the Sirdar being struck in the forehead by a random shot and killed. His son warned by his predecessor's fate, built a strong little fort to protect himself and family from his unruly subjects. It is said that the village of Namal could formerly produce 500 matchlocks.

Since they have been disarmed, the character of the people has somewhat improved.

The above tálúkás are included in the Tullá-ganj Tehsil, and their respective revenue is as follows.

Districts.	*No. of Villages.*		*Revenue.*
Kullar Kuhár, ...	18	.....	15,000
Nurpur Suhutti, ...	28	.....	30,000
Tullá-ganj, ...	29	.....	55,000
Jabbi, ...	10	.....	10,000
Pakar Namal, ...	24	.....	35,000
	109		1,45,000

In addition to the above villages, there are eleven in Jageer valued at 7000.

Besides those districts already mentioned, which complete the list of Government villages, there are two tálukás in Jageer, Sone and Kutha, the former a Jageer of Sirdar Gurmukh Singh Lambá, the latter of Sirdar Shamsher Singh Sindhánwálá. They are situated in that part of the Punjab which is least known, not being in any of the usual routes traversed. In fact there is no entrance and exit, except over very rough and difficult hills, to which perhaps is to be attributed the general ignorance as to their position. The Jageer of Shamsher Singh borders on Nurpur Shuhutti, to the east at a point, where the hills diminish in height, and a road leads across the salt range. It is divided into three portions, Thoyá north of the hills, Khubakki in

the centre of the range, and Kuthá Dhák, to the south; of which the two latter alone are worthy of mention. At about four miles from Kuthá is Nur-Singh-Phohár, or the fountain of Nur Singh. Tradition relates that the avatár proceeded hither from Mooltán after the slaughter of the demon, and washed his hands in the stream which issues from the rock. This story is implicitly believed in by the natives, and a festival is held there annually in the month of April. The water rushes out of a cleft of the rock, and falls over the precipice into a ravine beneath, whence it wends its way out of the hills to the level plain in which Kuthá is situated.

This romantic little place is embowered in hills, and the trees in which it abounds afford shelter and shade to a great number of peacocks; in the edge of the cliff is a small temple built by Rájá Goláb Singh, with an inscription on it in Gurmukhi to the following effect; "This temple, the possession of the Sirkar (an humble allusion to Ranjit Singh!) was dedicated on 15 Poh, 1887, to the service of Nur-Singh-Phohár, by Rájá Goláb Singh." West of Nur-Singh is the táluká of Khubakki containing a few small villages, situated in a narrow strip of land between the hills. On either side of the village of Khubakki, east and west, is a fresh water lake, found by the accumulation of the water from the hills in the rainy season. Both of them are alive with wild ducks and other waterfowl, but the zemindars being an indolent race, they are not applied to the purposes of irrigation. They are, each about half a mile wide, and rather more in length.

About 7 miles west of Khubakki, commences the district of Sone which contains the great salt lake incorrectly laid down in most maps. The principal town of this district is Nausheráh, a village containing 300 houses. The fertile plain which is here enclosed between the hills contains 14 or 15 villages, the whole of the available land being under cultivation, but the zemindars being of the Awán caste are extremely lazy, and pay little attention to the soil. Besides the route from Khubakki, there is another road leading into the Sone táluká from Láwá, by the village of Angá, but the hills which lie between are with difficulty traversed by camels, and the road is little known. The salt lake is situated about 6 miles W. of Nausheráh at the fort of Mt. Sikesar. It is about $1\frac{1}{2}$ miles long and $\frac{2}{3}$ mile wide, but in the rainy season is half as large again as this. The water is very brackish and contains no fish, but is covered with wild fowl. There is apparently no

salt stream to supply the lake; the only rivulet which runs into it worth mentioning being a small stream, which comes from about three miles distance and is fresh at its source; and the salt quality of the lake, therefore, must be supplied from beneath. The salt mines of Choyá and Várchá, are situated on the southern side of the range of hills, which border on the Sone district.

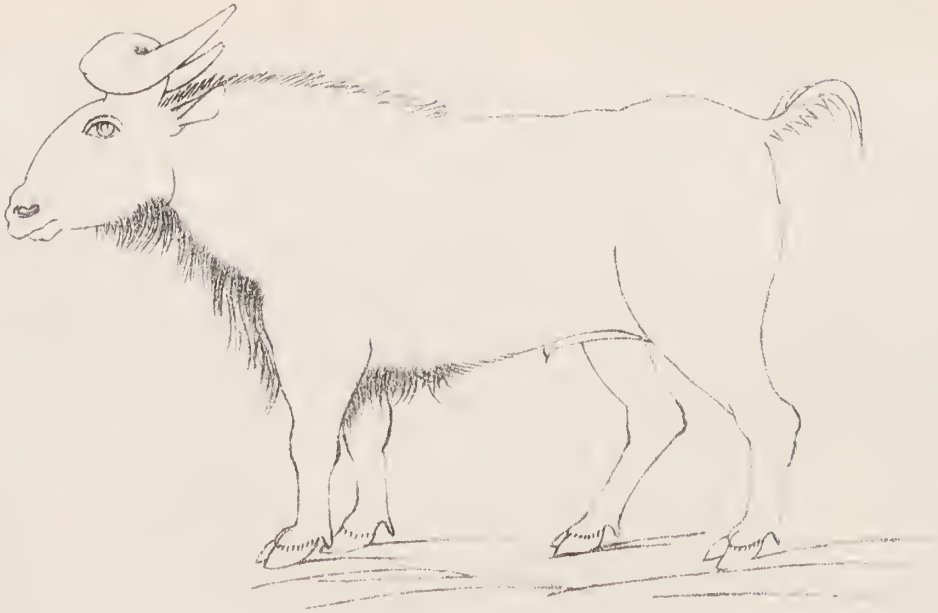
The salt lake extends in length from W. by S. to E. by N. On the N. side it touches the hills, which on the S. are 2½ kos off, and on the W. about 1 kos. On the brink of the lake are the villages of Chittá and Ugáli. To the west of the lake commences the ascent of the Sikesar hill, a peak rising up out of the other hills to a great height. The path to the summit is very rough, steep and difficult, but on account of the respect in which the hill is held, from the belief that the Pándavas resided there in their time of trouble, it is looked upon as a place of pilgrimage. The higher parts are not unfrequently covered with snow in the cold weather, and the level places near the top in which water collects during the rains, abound in shrubs and flowers not found beneath, and which would probably well repay botanical research.

An immense stone fabled to have been placed there by the Pándavas, is the point at which the April festival is held. The extreme summit is crowned by a small house now in ruins, built by a bairágí. This point is called the Singhásan or royal seat.

From Sikesar, the Attock and Jhilum rivers are easily discerned, and it is said that the Chenab is also visible in a clear day. The surrounding country lies stretched out like a map beneath. The directions of the chief places seen are as follows: Namal N. W. ½ N. Nausheráh, E. ½ N. Khubakki, E. N. E. Chukrálá, N. N. W. ½ N. The salt lake or Samudra as it is called by the natives, E. by W. Wah-i-kailá south of the salt range, S., &c.

From Sikesar the hills of the Putial range extend in a series of ridges to a distance of 9 or 10 miles in an unbroken line, without a single village intervening. It is in this hitherto unknown region that copper is supposed to exist, and it is much to be desired, that these hills should be examined by a scientific observer, and their geological and botanical capabilities be made known.

Wherever the kos is mentioned in the above statement, it is assumed to be a mile and a half, which experience has shown to be about the average of the Panjábi kos on the further side of the Chenab.



BUDORCAS TAXICOLOR,
Tákin or Bovine Antelope of the Eastern Himalaya.

On the Tákin of the Eastern Himálaya : Budorcas Taxicolor mihi N. G. (With three Plates.)—By* B. H. Hodgson, *Esq.*

When characterising in the autumn of 1847, the genera of the Ruminants of India,† I remarked on the nearly total absence of the Bovine Antelopes, a group abundantly diffused throughout central and Southern Africa, but of which we had then in India no recorded sample, except the Nilgáü or Portax Risia, and of that single species no instance on this—the moist and temperate side of the Ganges. The remarkable animal which will be the subject of the present paper, adds however, another and a highly characteristic species to that group ; and, when it is stated that this animal has its abode in the Mishmi mountains, or, in other words, in the Eastern Himálaya, all persons conversant with the features and climate‡ of that locality will readily acknowledge the interest attaching to the discovery in our moist umbrageous and precipitous mountains, of a large and striking quadruped all the allies of which, with one exception, are proper to the arid and fervid plains of central and Southern Africa.§ My spoils consist of three skins in good condition belonging to males and females of mature age, of a nearly perfect male scull, and parts of other sculls of both sexes.

To Major Jenkins' kindness I am indebted for the whole, part of which reached me nearly two years ago, but too imperfect for description. The spoils I now possess are however quite adequate, and will justify the announcement of a new genus and species, which I proceed to characterise and describe without further preface.

The large, massive and remarkable animal, denominated Tákin by the Mishmis, and Kin by the Khámtis, is one of the group of Bovine Antelopes. Its nearest affinity is probably to the Gnoos ; but it has various points of stronger connexion with Musk Oxen, and in a natural

* Βοῦς et Δορκάς.

† J. A. S. No. 181, for July 1847, with corrections in No. 197, for Nov. 1848.

‡ J. A. S. No. 185, for December 1847, and No. 206, for August 1849.

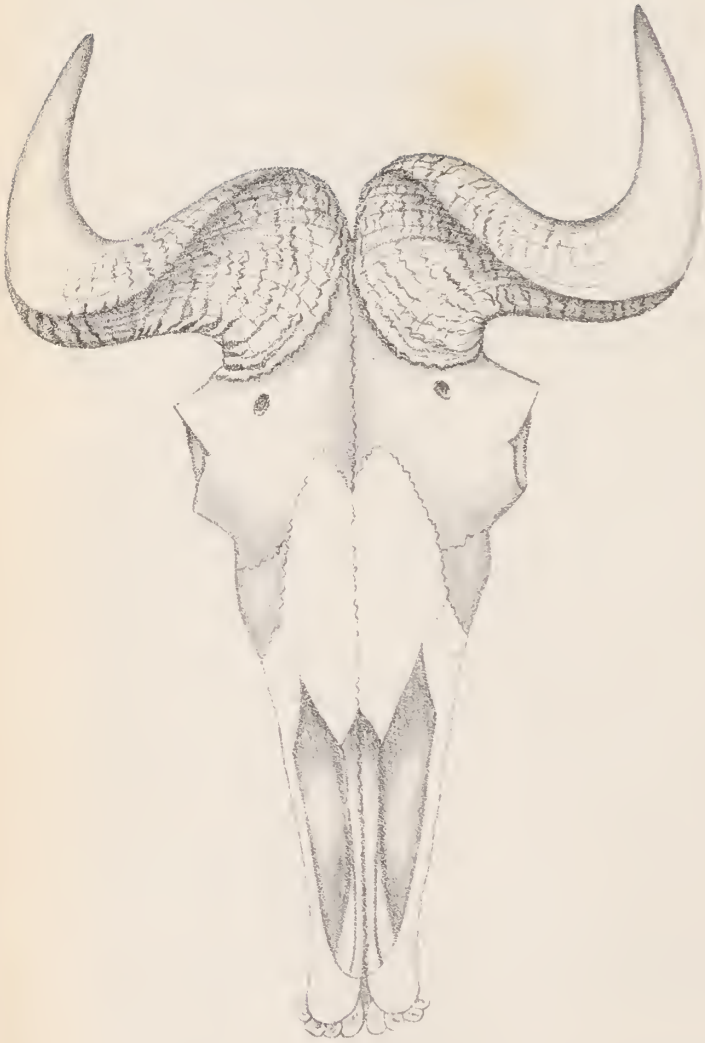
§ The recent discoveries of a great snowy chain and immense lake in this region, seem however to indicate that our heretofore notions of its climate and vegetation will soon receive material modification. As much might I think have been inferred from the size and numbers of its Herbivora, Darwin's reasoning of an opposite tenor seeming to me unsatisfactory.

system its place would probably be assigned between those two types. But before making further allusion to its affinities, I shall give a careful description of its appearance and structure, premising the account of them by a statement of what is known of its habitat and manners.

The Tákin tenants the Easternmost part of the Himálaya, or that which is adjacent to Yúnán, Sechuen and Khám. In the Himálaya it is stated to belong more especially to the Upper or Alpine region, but to be found also in the central region, though never in the lower region;* and it probably extends its range from the Himálaya proper, to the proximate mountains of China and Tibet. The Tákin derives its high interest for the naturalist, not merely from its compound structure, made up, as it were, of the Ox, the Antelope, the Sheep and Goat, but also from its habitat, so remote and dissimilar from those of its allies. The Tákin is described as being an animal of high courage and great ferocity; so that it cannot be taken alive, and is killed by the natives with much trouble and some risk. It is said to be very gregarious, though old males are sometimes found solitary; but, for the most part, the species herd together in considerable numbers. Strength and ferocity are inscribed in very legible characters on the form and aspect of the Tákin, which is a much larger as well as bulkier animal than the lusty Caprine Antelope (Thár) of the Himálaya. The Tákin however reminds one in several respects of the Thár,† which it much resembles in colour as well as by its short Caprine tail, harsh adpressed hair, and vigorous make, suited to climbing these stupendous mountains. But the Thár is in structure as much more Antelopine as the Tákin is more Bovine. The latter is not much, if at all, inferior in size or bulk to the female Yák; and, as seen from the front especially, with its lunate horns displayed and its short tail concealed, it would be at once pronounced to belong to the Ox kind, close examination alone being likely to suggest any doubts on that head. The Tákin, as I have said, is nearly as large, both in dimensions of extent and in bulk, as a female Yák; and its massive form and peculiar proportions are quite Bovine. It is in length, from snout to vent, six and a half feet; and in

* See J. A. S. No. 206. Phys. Geog. of Himálaya.

† Schinz in his Genera Mammalium has actually ranged this animal with the Gnoos. This is a mistake, but one indicative of remote affinity. The Thár is a typical Nemorhedus.—See J. A. S. No. 181, for July 1847.



BUDORCAS TAXICOLOR N. G.

height, three and half feet at the shoulder. Its head is 20 inches. Its ears 5 inches. Its tail 3 inches, or 8 with the hair. The head is large and heavy, the neck short and thick, the body somewhat elongated but deep in the barrel, and yet more so in the shoulder, which is said to be raised in the Bisontine manner. The limbs are short, stout and Bovine, and so are the broad hoofs. In Tákin there is no approach to the Cervine limbs, or equine body and tail of the Gnoos; and the horns of the Tákin, which to a superficial view are round, smooth and lunate, would complete the impression of a Bovine animal, were not progressive attention almost necessarily now turned to the short narrow pointed ears, very short depressed tail, and hairy attenuated muzzle of our animal; particulars in which, with others to be presently mentioned, the Tákin deviates from the Bovine to approach the Ovine or Caprine type, and is sundered from the Gnoos in the same degree, that it is approximated to the Musk Oxen or Ovibos. But we must now describe the structure of our animal with more detail, and technical precision, from horn to hoof, and from nose to tail, how distasteful soever such descriptions may prove to the general reader.

The head of the Tákin is large, heavy and inelegant, exhibiting a mixed character, compounded of the Bovine and Ovine types. Its vertical dimensions (or height) are great, owing to the lofty curve of the nose and forehead, the chaffron being more romanised than even that of the Barwál (Ovis Baruál). But the length also of the head of the Tákin is considerable, and surpasses that of any Caprine or Ovine head, though inferior to the full normal length of head, characterising the Ox tribe. The head, though large and upon the whole perhaps Bovine, yet lacks the characteristic squareness of the Ox's head, both jaws being attenuated towards their anteal extremities much more than in the Ox, though somewhat less than in the Sheep and Goat. There is in the muzzle of the Tákin neither the nudity nor the breadth of that of the Ox and Gnoo, but on the contrary the lips are both tapered and clad with hair, almost as much as in the Goats and Sheep, and the animal is consequently a browser not a grazer. Nevertheless the mere nostrils, which are wide and terminal, have a decidedly Bovine character both as to form and position; and, as it were to remind us of the true Bovine muzzle, there is a clear broad margin round the nostril which is quite nude and moist. Whether the nostrils of the Tákin possess the Cato-

blepine valve cannot be determined with certainty from my specimens, but apparently that valve is proper to them. The lofty boomed chaffron exhibits no trace of the cartilaginous protuberance, or of the peculiar disposition of the hair, belonging to the Gnoos; nor is there in any part of the face of the Tákin any cuticular organ, gland or pore, whether suborbital, malar or intermaxillary. The high curvature of the chaffron is continued backwards between and beyond the horns, so that the whole head presents in profile the same egregiously beaked character, which Swainson,* has assigned to the Gnoo, though other representations of that species do not exhibit this peculiarity in the same prominent light. The eyes, which are of that medial size proper to Bos and Ovis, but distinctly smaller than in the typical Antelopes, are projected boldly from the sides of the head by the saliency of the orbits yet have a very lateral field of vision with little command of the prospect in front. Their position is high up in the head; that is, it is remote from the muzzle and close to the bases of the horns, as in the Ox and the Sheep (Ammon); and even more conspicuously so than in them. The horns also, as well as the eyes, have a backward position in the head, far from the muzzle but not equally proximate to the nape, owing to the characteristically Cervine or Antelopine development of the encephalon or brain-pan in the Tákin; a peculiarity diametrically opposed to the normal character of the Bovine head.

The horns of the Tákin are inserted on the highest part of the forehead, as in the Ox and Sheep, though not, as in them, at the posteal termination of the head; for the encephalon of our animal, as just noticed, spreads behind its horns in the manuer of the Deer and Antelopes but more restrictedly. The Tákin's horns are attached, not to the lateral margins of the frontal crest, as in the Ox, but to its superior surface, as in the Antelopes, Goats and Sheep. Partly owing to the narrowness of the forehead in this its upper part—a narrowness contrasting remarkably with the Bovine breadth of frontals—and partly owing to the thickness of their bases, the horns are nearly in contact on the top of the head, but without actually touching. Their direction is first vertically upwards, then horizontally outwards or to the sides, then almost as horizontally backwards. Their basal portion, which has the vertical direction, is short and the rest of the length of

* Classification of Quadrupeds, 1. 276. Plate.

BUDORCAS TAXICOLOR, nov. gen.

the horns, keeping the horizontal course, is divided pretty equally between the laterally and posteally directed parts which curve into each other, so as to describe a bold lunate sweep with the pair of horns. In the females, which as well as the males are armed with these weapons, only of smaller size, the horns towards their points are approximated, and the points themselves turn towards each other. In the males however there is no such mutual inclination of the tips, but the horns, throughout their terminal halves nearly, run almost parallel to each other, and also in the main horizontally (in the ordinary position of the head), there being but a slight rise in that portion of the horns. The length of the horns is very moderate, being only twenty inches along their curves; but their robustness is great, and they are gradually attenuated from their thick bases. In their thick basal portion they are depressed and somewhat angular, but gradually become rounded. The basal section is trigono-ovoid with the wider and rounded edge turned obliquely forwards and outwards, and the narrower and cultrated edge or angle directed obliquely backwards and inwards. These narrow edges have the character of evanescent Caprine keels, which are turned towards each other over the nape; and the broad surfaces of the horns are for the most part the superior and inferior ones, but varying according to the course of the flexure. The basal depression of the horns, though marked, is less excessive than in Ovibos, and is void of tumidity or inflation, such as characterises the base of the horns in the Musk Ox and also in the Caffrarian Buffalo. The horns tend to a point which however is blunt not sharp. In their basal halves they are marked by numerous crowded rings, which go uniformly all round the horns parallelly and independantly of each other, and with perfect distinctness in youth though the annulation is apt to be more or less obscured in old males, by the rough uses these weapons are put to by them. The terminal halves of the horns are quite smooth. Thus, the horns of the Tákin are essentially Antelopine though seemingly Bovine, the compound flexure the annulation and striation being normally Antelopine characters; and the like is true of their osseous diagnosis, as will be seen in the sequel. The ears are short, narrow and pointed, with a decided Ovine or rather Caprine character, as in the Musk Ox, but not in the Gnoos. The neck is short and thick, being loaded with muscles suited to support the large and ponderous head, and which muscles are

no doubt aided in that office by tendinous ligaments attached to a high interscapular ridge, such as distinguishes Bibos, Bison, Damalis and no doubt also Catoblepas and Ovibos, though I do not find it specified by Ogilby or Smith or Swainson in regard to the two last forms. In the Tákin, which is our type of Budorcas, the true dorsal ridge is, I am assured, forthcoming; but not being possessed of a perfect skeleton, I cannot positively assert the fact, especially as this ridge, when regarded in the light of a generic character, results, not absolutely from the presence or absence of elongated spinous processes (for in that sense it is universal among the Ruminants), but only from the ordinary or extraordinary development of those processes. The barrel of the Tákin is elongated and deep, and the chest still deeper with elevated shoulders but not a slouching croup. The lusty limbs which exhibit the usual equality of length before and behind, are short, stout, rigid, bovine and terminate in broad hoofs, not less clearly modelled on the Ox type, but devoid of the several peculiarities distinguishing the Musk Ox's hoofs. The false hoofs are well developed and obtusely conical in shape. The short depressed triangular tail, has an entirely caprine character, and in this respect our animal differs remarkably from all its Damaline and Catoblepine allies, save only the Musk Oxen.

The hide is extremely thick and is pretty and uniformly covered with harsh straight adpressed hair similar to that of the Arná, and also of the Thár. It is of equable moderate length, save upon the pectoral surface of the neck whence depends a longer and mane-like fringe extending from the gullet to the chest, both inclusive, as in so many of the Damalines and Catoblepines, which, however, also exhibit a true or dorsal mane, as well as sundry facial tufts and vibrissæ, all of which are wanting in the Tákin. There is no peculiar disposition of the hair on the chaffron of the Tákin, nor are its lips or orbits any way specially bristley, as are those of the Gnoo. The females, as already noticed, are furnished with horns. The teats are four and are placed on an udder. There are no suborbital or other facial, nor any inguinal or interdigital glands or sacs; all important structural particulars whereby the Tákin manifests its departure from the Antelopine to join the Bovine group of animals.

We must now proceed to the osteology of our subject by describing its scull with as much care as we have employed in the above detail

of its superficial characters; but before so doing we must notice the colours of our animal, though this be a point of much less importance than ordinary books of Zoology would lead their readers to imagine. The entire body of the Tákin, both superiorly and laterally, is of a yellowish grey or Badger-colour, a circumstance whence we have derived its specific name (Taxicolor). The whole head and neck, with most part of the belly, the entire limbs and the tail, are black. Edge of the lips paled. A black list down the spine. The quantity of the grey colour of the body is variable, the whole animal being sometimes uniformly black, owing to the absence of the grey hue, which hue results from each hair (upon the grey parts) having its basal two-thirds, sordid yellow of a straw tinge, and its apical third, black. Hoofs, horns, and nude margin of nostrils, jet black. Hair on the body, $1\frac{3}{4}$ to 2 inches long; on the neck below, $2\frac{3}{4}$ to 3 inches; on the gullet, whence it depends like a beard, 5 inches and more. Females resemble males in colour as in characters; but they are smaller and have horns of less size and more or less mutually incurved towards their tips. The elongated hair of the males is likewise much less conspicuous in them.

The scull of the Tákin is exceedingly massive and heavy, the whole of the bones, having a thickness unparalleled in any Bovine animal I have seen, with the single exception of the Gour or Bibos gaurus, an animal whose scull likewise resembles that of the Tákin, in the extreme roughness of its whole surface. The Tákin's scull is distinguished by a compression and elevation more proper to Ovis than to Bos, but united with an elongation such as is found in the Bovines only. The culminal line of the scull, is throughout greatly but not uniformly curved, the uniformity of its arcuation, being somewhat interrupted by the rather abrupt rise of the frontals between the cores of the horns —a rise, however, not constituting a detached intercornual ridge, as in the Gour, but only an abruptish ascent of the frontals between the horns, somewhat in the manner of Ammon, and of other thick-horned Ovines such as the Barwâl. But in Ammon and Barwâl, as in all Bovines, the superior plane of the scull, together with its longitudinal development, terminate with the intercornual crest, whereas in the Tákin, as in the Deer and Antelopes, though in a less degree, the frontal and parietal bones are carried backwards behind the horns, so as to constitute an ordinary encephalon upon the upper surface of the

scull. Thus the nasal, frontal and parietal bones partake of the curvature proper to the whole superior surface of the scull; and that surface falls into the posteal and occipital surface by an angle much less acute and decided than in Bos or Ovis (Ammon), giving thereby to the scull of the Tákin a decidedly Antelopine (cervine) character quoad this important feature. The facial bones have a length intermediate between the Ovine shortness and Bovine elongation, and they terminate in front less broadly and squarely than in Bos, less narrowly and roundly than in Ovis. The lower jaw is nearly straight, so that the inferior line of the scull, partakes not of the arcuate form distinguishing its superior or culminal line. The nasals, not remarkable for defect or excess of length or of width, are signally so for their great convex curvature, both cross-wise and length-wise, so as, with the depth of the cheek bones, to leave a very ample cavity for the lodgment of the olfactory apparatus. On the other hand, the auditory cavity is extremely small. The frontals are far from possessing the same development, in length or breadth, before the horns or on the facial aspect of the scull, as distinguishes these bones in Bos, whose frontals are entirely developed anteriorly to the horns, and whose widely separated and moderately thick horns afford ample space for the lateral spread of the frontals, whereas the proximate and thick horns of the Tákin, reduce the width of the frontals, (which are but partially developed anteriorly to the horns,) in their upper part to an extreme degree of narrowness. From this narrowest and intercornual part, however, the frontals of the Tákin, widen rapidly forwards until between the very salient orbits, they have a breadth exceeding that of the frontals of O. ammon or of any Antelope, whose scull is accessible to me.

The curvature of the nasals is continued to the frontals, especially the transverse arcuation, which is signal between the orbits, but the arcuation length-wise is less marked and less uniform, owing to the cause above assigned. Indeed, between the cores of the horns and the orbits, the frontals are nearly flat, but recover their longitudinal and transverse convexity on passing backwards beyond the horns. The frontals are broader than long, as measured between the anteal edges of the orbits and the frontal crest, but nearly equal in length and width, if taken between their forward apices, and their junction with the parietal bone. The intercornual crest is very short, as already

remarked, and also straight, between the cores of the horns. The cores of the horns spring proximately and superiorly from the highest part of the frontals, having with regard to their culminal position an Ovine (Ammon) and Bovine character, but with regard to their proximity an anti-bovine but still Ovine character. The bone of which the horn cores is composed is not palpably porous, though it is by no means dense in structure; and there is, within the base of each core, a large but shallow sinus confined to the base, and communicating externally (the scull) with the supraorbitar foramina, and internally with the nasal cavity. The parietes have, as already remarked, a Cervine or Antilopine character, quite opposed to the Bovine type, but passing from the true Cervine to the abnormal Antilopine type as seen in the Goral (Kemas* goral) of these mountains. The orbits are signally prominent, more so than in any Bovine animal, save the Gour (Bibos gaurus), and equally so with the typical Antelopes such as Cervicapra Hodgsoni, &c.: but their direction is still quite lateral, owing to the equal development and projection of all parts of the external rim of the orbit, there being no obliquity to the front, nor any greater development of its posteal than anteal margin, in the orbitar ring. The margin of the orbits is extremely rugose all round. The lower jaw, as already noticed, has little upward curvature forwards, being nearly straight. Its posteal and vertical portion (coracoid) is much developed and the articulating surface or hinge of the jaws is consequently elevated far above the line of the upper molar teeth. Owing to the narrowness of the lower jaw in front, the incisor teeth are inserted in a curve as in Ovis and Capra, not rectilinearly to the front as in Bos. The teeth are $\frac{0\,0\,6}{8\,0\,6}$, there being no canines, and the usual number of molars and incisors. The molar teeth are large and occupy a greater space in the jaws than either in Bos or Ovis, and they are noticeable also for their length or elevation above the margin of the jaws. Their crowns have the usual obliquity outwards and the usual folds of enamel; but the saliency of the enamelled ridges is specially observable, independently of youth. The incisors lean less forwards or outwards than in Bos, more so than in Ovis (Ammon), and their crowns have a medial degree of obliqueness or slope inwards.

* See J. A. S. No. 181, for July, 1847.

The dimensions of our animal and of its scull are as follows :—

	Male.			*Female.*		
Length from snout to vent,	6	6	0	6	0	0
Height at the shoulder,	3	6	0	3	0	0
Length of head, to frontal crest,	1	6	0	1	4	0
Length of ears,	0	5	½	0	5	0
Length of tail only,	0	3	0	0	2	¾
Length of tail and hair,	0	8	0	0	6	0
Length of horns by curve,	1	8	0	1	2	½
Basal girth of horn,	1	0	0	0	9	½
Basal interval of horns,	0	0	⅜	0	0	½
Terminal interval of horns,	1	0	0	0	6	½
Length of fore-hoof, along sole,	0	4	½	0	4	0
Width of ditto ditto,	0	3	½	0	3	0
Height of ditto, oblique, to end of toe,	0	3	0	0	3	0

Scull of Male.

Length from parietes to symp : intermax : straight,	1	6	½
Ditto, from crest of frontals to ditto,	1	5	¼
Height extreme,	0	10	0
Length, extreme, of lower jaw,	1	1	½
Length of series of lower jaw grinders,	0	5	¼
Length of largest grinder of lower jaw,	0	1	⅜
Width of ditto on crown,	0	0	½
Length of nasal bones,	0	6	½
Length entire of frontals from anteal apices to parietes,	0	6	⅝
Length of frontals from fore-angle of orbits to frontal crest,	0	4	⅝
Width of forehead between nearest angles of orbits,	0	6	¼
Ditto between widest angles of orbits,	0	7	¾
Diameter of orbits,	0	2	¼

P. S. In the above account of a most interesting animal, which is clearly the type of a new genus of the Bovine Antelopes, or Budorcine Sub-family of the Bovidæ, I have purposely avoided throwing my facts into the mould of a generic character, with refereuce to the uusettled state of information and opinion regarding the group of which the Tákin is a very characteristic, and I think the most characteristic type. But, whoever shall have priorly adjusted the characters of the Sub-family with those of its included genera, must find the selection of

significant particulars for a generic (and specific) character of Budorcas, from the above ample and careful account of our animal, the work merely of five minutes.

Since the above paper was written, I have received from Major Jenkins a very neat model in wood, and coloured, of the Tákin. The model is the work of the native chief, who slew, and presented to Major J. the animals whose spoils formed the materials of my description. This model is very neatly executed, and is a surprising sample of Mishmi ingenuity. It confirms my description, as to figure but not quite as to colour; for, there is a white half-moon mark on the top of the forehead, and the grizzled hue of the body is confined to the back, the flanks as well as the rest of the carcase and limbs, being black. This model pourtrays a male of mature age and presents to view an animal of more than Bovine bulk and massiveness, with an elongated deep body, high shoulder, thick bull neck, immense head not much boomed on the chaffron, and short rigid Bovine limbs supported on broad hoofs. With the model, came to me some sketches of scenery due to the same dexterous hands. These sketches lead one to infer that the country frequented by the Tákin, abounds in vegetation arboreal and other. The trees are numerous, large, and many of them, conifers.

A Third Notice on the Ball Coal of the Burdwan Mines.—By Henry Piddington, *Cur. Mus. Eco. Geology.*

The two previous notices on this singularly formed coal, will be found in the Journal, Vol. XVII. p. 58, for January 1848, and in Vol. XVIII. p. 413, for April 1849.

I have now through the kindness of Mr. Homfray, been enabled to see a large heap of it at Howrah as brought from the mines; and to a valuable collection of choice specimens which he had put by, he kindly allowed me to add such as I chose to pick from the heap. Mr. Theobald, Junior has also sent to the Museum a basket full of the balls.

We have thus at length an abundance of this remarkable variety of coal, and it is impossible to examine it in the mass, and in detail, without at once being satisfied that, as I conjectured in my second notice, this is neither more nor less than coal softened by heat, and taking when cooling this concretionary and semi-concretionary form and in some instances, perhaps, indeed in the whole mass when seen *in situ* it has adopted the semi-columnar appearance with a true ball and socket joint, like basalt. One of Mr. Homfray's specimens indeed, is a most splendid and perfect instance of this, being a fragment of what we might term a carbonaceous shaft 7 or 8 inches in diameter, with a complete ball and socket articulation! Mr. Theobald in his note says that "the seam in which the ball coal is found at Kumárcolly including some partings, is 40 feet and upwards in thickness," he farther adds "I should attribute the globular structure to a partial change which in many places is effected by trap dykes."

The larger balls are dull exteriorly, and marked with the alternate bands of bright and dull coal of the mineral in its massive state, but the glance (of the surface) brightens as the balls decrease in size, till the very small ones of the size of an egg or a walnut become perfectly bright and highly polished; and in these all external trace of the lamination* of the coal has disappeared. I have found in none however any of the pavoine lustre so common in the Anthracites.

In the fracture of the small balls, traces of the lamination are at times to be found; but generally these balls may be described as composed of minute, irregularly set laminæ, very bright and specular like bright coal or coke-dust cemented or half melted together.

The balls are rather tougher than the matrix coal.

Whether in mass or in powder it swells considerably in the crucible, and the coke is excessively slow and difficult of incineration and it has the peculiarity of forming over the lamp, and in an open crucible a kind of coke which must be pulverised to reduce it to ash in any moderate time. It perfectly resembles in this respect the Anthracite which seems to have its carbon in a state approaching to that in which it exists in Plumbago.

* By the lamination I mean the alternate bands of dull and bright Coal which all our Indian Coals have, and which is found also in many European kinds of Coal.

The following are the analysis of the matrix and of a perfect ball from it.

	Ball.	Matrix coal.
Sp. gravity, ...	1.32	1.34
Gascous matter, ...	24.00	28.00
Carbon,.....	68.75	59.60
Ash, ...	7.25	12.40
	100.00	100.00

It would thus appear that the purest parts of the coal, i. e. those containing the least proportion of earthy and metallic matters, are those most liable to affect the globular form and this explains, in one way at least, the occurrence of the small bright balls close to those ten times their size, for we may suppose them to have been originally the remains of some vegetable with less earthy matter in their composition. I shall send home a good supply of specimens, and I trust we shall thence obtain some good microscopic examinations of it.

Note presented by H. Torrens, *Esq., C. S., Resident, Moorshedabad, with a specimen of Iron from the Dhunakar hills, Birbhúm.*

This specimen of the iron smelted by the Sontals of Birbhúm, was procured by Dr. Robert Young near a place called Bullia-narainpur below the Dhunakar hills about thirty miles, as the crow flies from Moorshedabad. The country is described as covered with an interminable Saul forest, of which the larger trees appeared to average about two feet diameter. The small shafts sunk throughout the country by the Sontals for "*iron earth,*" as they call it, are astonishingly numerous. The forest furnishes them with excellent charcoal, and they are singularly careful to cut the timber for it in regular patches of about a *bigáh* in extent, driving the shaft of their little mine often between

the trees, destined to smelt its produce. The expanse thus cleared is abandoned for a regrowth of the Sauls. The furnace or *chulá* is of clay, about 3 to 3½ feet broad, and each is served with three large bellows worked by the feet; the heat produced is considerable. The ore undergoes a second, and sometimes a third smelting, and the iron is called the best in India. The price on the spot is 3 Rs. a maund.

The Sontals of these forests are described as a hardy but not a comely race, eating like the Dhángars, rats, snakes and any vermin; they are equipped with bow and arrow wherever they go, and let nothing alive escape them. Animal life there is consequently little of, although the barren character of the forest, and the scarcity of water, must also account in a measure for this. Spotted deer (the *Axis* of Buffon) and two bears were shot by my informants, but the animals seemed to have all what is termed a great deal of *travel* in them, as with creatures used to roam far for food. The Sontals are handy in devising and constructing implements. Their cart is chiefly of hewn Saul wood, the wheels being solid, and the whole constructed of wood alone. The knife they use for cutting food is of a very hard wood, not procurable in that part of the country. They were not observed to have the bamboo at all in use.

I think the peculiarity of using wooden articles, even to the knife, in an *iron* country is as remarkable a fact as I have met with in India. The explanation is most likely to be found in some superstition connected with the desecration of the staple they live by, if used by them for vulgar purposes of common life. An analogous idea of *reverence for the thing they use or live by*, may be traced largely throughout Hindu society, from the silkworm tender, who preserves a diet, lives single, and neither washes nor shaves during the production of the cocoon, to the writer who worships his inkhorn, and the champion *(pahlwán)* who will not lift his two-handed sword *(bánâ)* till he has salaamed to it. This consideration might be followed out in an exposition of what may be termed "the philosophy of idolatry."

Notice of a Trip to the Nití Pass. By Lieut. R. STRACHEY. *Communicated by order of the* HON'BLE THE LIUET.-GOVERNOR, *N. W. P.*

I returned here some days ago from Nití, and although I have not much in the way of personal narration to give, all that I expected has, I believe, been done. I reached Nití early in July, having as I passed Joshináth (at the union of Dáuli and Vishnuganj) set up a Barometer, &c. there with a rain-gauge. These have been regularly registered from the end of June, till the middle of October, as also have a similar set of instruments at Nití. At both places, the registers were kept by natives of Almora whom I took up with me. About a week after my arrival at Niti, I started on my first expedition. My route you will see from the accompanying sketch map. The old map showed none of this and my brother's map was likewise quite wrong, so it was not till I had been over the ground that I got a clear idea of the geography of this part of the country. I went viâ Marshak pass 18,500 ft. to Raj-hote, there visited the pass into Tibet called Tumjun-la 16,500 and went down the river from Raj-hote as far as it was practicable, returning to Nití by Chor-hoti pass 17,500. You will see that this valley of the Raj-hote river exactly corresponds to those crossed on the road, from Milam into Hundes, the Marshak and Chor-hoti passes being the parallel of Unta-dhura, and the identity is still further shown by the geological structure of the mountain ranges. During this and my subsequent journey, I collected a considerable number of fossil shells which I have no doubt will enable competent geologists to decide fully on the age of the strata in which they were found. I can only venture on generalities.

Shortly after my return to Nití, I was joined by my brother Henry from Ladak, who came viâ To-ling and the Nití pass without meeting with any obstruction. He remained with me till my return here. With his help I began horary meteorological observations at Nití, which were continued without interruption for six days, by which time it had become clear that the law of the hourly variations had been sufficiently developed. About the first week in August, after these observations had been completed we started together for the Nití pass,

with the intention of undertaking a series of meteorological observations in the plain of Hundes, and also hoping to be able to fix the position of Kailás and Gurlá, and generally to improve the old map of Hundes, by trigonometrical operations, based on the great snowy peaks, the positions of which have been fixed by the G. T. Survey. I may as well at once go on to say that this has been done, and that the new survey has enabled me to draw out with a fair degree of accuracy, my survey work of last year, and the determination of the positions of Kailás and Gurla will equally add to the value of my brother's first rough survey of his route to Mánasarowar. The greater part of this work has been drawn out, and a reduced copy, 8 miles to an inch, will be begun by my brother directly, which shall be sent to you as soon as it is finished. This map will serve to illustrate the account of my last year's trip into Hundes, as well as this year's operations near Niti. I intend to set about writing them directly, the former being already drawn out in the rough.

The day after we crossed the Nití pass, we were met by people sent to look after us by the Zungpun of Dábá; they however talked in the meekest possible way, and only asked where we were going. This we explained, and next day we fixed on a place at which to encamp for the meteorological observations which were at once begun. The following day the Zungpun himself appeared in company with a man, who it seems had been sent from Gartok (on the news of my having settled at Niti having reached that place), specially to look after me, and likewise to keep the Zungpun up to his work, in preventing my entry into Hundes.

They asked permission to visit us, to which we of course assented at once. The interview began by their saying that we must be off instantly; to which we replied, that we intended to remain until we had completed the work for which we came unless turned out by the Zungpun. After much talk they by degrees abated in their demands, and from granting one day and then two, at last when they saw that we were utterly obstinate, ended by saying, that our proposal to go when we had done what we wanted, was quite satisfactory. It was understood, however, that we were not to go to Dábá or Dungpu. We told them indeed plainly, that we only intended to go on 4 or 5 miles to some hills from the summit of which we wished to take angles. The

weather, which for the first few days of our stay in Hundes had been fine, became abominable, and a good deal of rain fell, extending as far as we could see, over the whole plain of Guji, and covering the mountains north of the Sutlej with snow. I may as well note here that the plain of which I talk, the existence of which Capt. J. Cunningham doubts, was crossed in the direction of its length by my brother on his way from Ladak. It is I fancy 100 miles long, and where broadest 40 or 50 miles, and it is very distinctly seen from the vicinity of Nití pass extending in a N. Westerly direction to a great distance. We had encamped at the foot of a mountain, the top of which was about 18,000 ft. above the sea, and which we had fixed upon as one of our survey stations, our camp was at about 16,500 ft., which is I think very near the limit of possibility for a permanent camp in this region. We waited quietly here—the place is called Lanjar,—till the weather cleared up, which it did in course of time. The Zungpun remained in camp with his tail within a quarter of a mile of us, occasionally stirring us up to go; but he was not taken much notice of. The first fair day, however, we went up the mountain and remained there the greater part of two days and one night, during which the angles that were wanted were taken and horary meteorological observations made for a period of 24 hours, also of Magnetic Dip, &c. When this was done we moved on to the Lung-yung hills to complete the triangulation that was to fix the position of Kailás and Gurla. The Zungpun did not think it worth while to follow us, though we had, in reality, gone so close to Dábá and Dungpu, that he could not have prevented our going to either place, if we had been so disposed; indeed it looked very much as though his waiting till we moved was a mere pretence to take in his own superiors. There can be little doubt that at the bottom of all this non-interference with us, was the utter impossibility of his doing any thing if he had wished it. At that time there were, I believe, in Dábá, more British subjects than Tibetans; and although there has hitherto been a sort of impression, that our people were afraid of the Tibetan authorities, and therefore declined to take English travellers into Hundes, the result of this last expedition has been to prove most satisfactorily to me that this is utterly unfounded. Indeed, the whole of this part of Tibet is absolutely at the command of our Government, for by stopping the export of grain across the frontier the

whole of Guji would be starved, and of this they must be just as well aware as we, and no doubt far better. It is perhaps hardly probable, that it will ever be worth the while of the British Government to coerce that of Lassa; but if it be, I should conceive that closing the frontier would most effectually bring them to reason.

Having concluded our operations at Lung-yung we returned viâ Shelshel, Raj-hoti and Chor-hoti passes to Nití, which we reached early in September, having satisfactorily cleared up the doubtful points in the geography of this part of the mountains.

I had determined to remain at Nití till the end of September, in hope of getting fine weather, and of being able to make another ascent to some considerable height. The bad weather towards the end of the month, however, disappointed me in this, and I was at last at the beginning of October, only able to get up to about 14,700 ft. down to which the mountains were covered up with snow. Between this elevation and Nití (11,500) corresponding Barometrical observations were made by my brother and self, and the difference of height was also measured by the Theodolite, for the purpose of testing the formula by which heights are calculated from Barometrical observations.

We left Nití on the 10th October, and came straight down here only stopping a few days on the road, to make another similar set of Barometrical observations between heights of 10,500 ft. and 5,500 ft.

In the history of this year's work I shall explain the nature of our Trigonometrical operations, from which any one who wishes to do so may see the data on which our position of Kailás rests.

PROCEEDINGS

OF THE

ASIATIC SOICETY OF BENGAL

FOR DECEMBER, 1849.

THE usual monthly meeting of this Society was held at the Museum on Wednesday, 5th December, 1849.

The Hon'ble Sir J. W. COLVILE, President, in the chair.

The proceedings of the former meeting having been read and confirmed, and the accounts of the past month laid upon the table, the Secretary stated that the following gentlemen had intimated their wish to withdraw from the Society; viz., G. Hill, Esq., C. J. S. Montague, Esq. G. R. Wilby, Esq., W. Taylor, Esq., James Corcoran, Esq., and John Muller, Esq.

The following gentlemen were candidates for election:—

J. J. Gray, Esq. Maldah, proposed by J. W. Laidlay, Esq. seconded by Rev. Mr. Long.

J. C. Marshman, Esq., proposed by J. W. Laidlay, Esq. seconded by the Hon'ble Sir J. W. Colvile.

A communication was read from W. Grey, Esq., Under Secretary to the Government of India, forwarding at the request of the Government of Van Dieman's Land, a copy of the Rules and the proceedings of the Royal Society of that Colony, together with the following extract of a letter from J. E. Bicheno, Esq., Colonial Secretary, dated 19th July, 1849.

"The Council of the Society solicit me to express the earnest wish on their part for the establishment of a direct system of intercourse,

mutual co-operation, and interchange of publications and of the productions peculiar to India and this colony; a system of reciprocity which it is manifest must tend to further the interests, views, and objects of all such associations."

It was resolved that the Society express their willingness to concur in such co-operation so far as practicable, and that the Secretary forward to the Royal Society of Van Dieman's Land a copy of such volumes of the Society's Journal and Researches as may be available.

Read a letter from W. Seton Karr, Esq., Under Secretary to the Government of Bengal, presenting on the part of Government, a highly finished map of the district of Balasore for the use of the Museum of Economic Geology.

From the same, forwarding for deposit in the library of the Society, a copy of M. Eugene Burnouf's edition of the Bhagavat Purána.

This superb specimen of typography, unquestionably one of the finest editions of an oriental work ever published, excited the warm admiration of the meeting. The best thanks of the Society were ordered to be returned for this donation.

From Capt. F. C. Minchin, Private Secretary to his honor the Lieut.-Governor, North-Western Provinces, forwarding for publication in the Society's Journal, an interesting letter from Lieut. R. Strachey, giving a brief sketch of his recent meteorological and geographical observations at Niti and its neighbourhood.

From Dr. H. Falconer, enclosing a letter from Dr. Asa Gray, Corresponding member of the American Academy of Arts and Sciences, Massachusetts, presenting to the Society a copy of the proceedings of that Academy.

From Dr. A. Weber, presenting a copy of the first number of the first part of his edition of the Vájasaneya Saṇhitá published in Berlin.

From Henry Torrens, Esq., V. P. protesting in the strongest terms against the dismissal of the Mauluví, in whose charge the Arabic and Persian books and manuscripts had until lately remained. Mr. Torrens pointed out the extreme care requisite for the proper preservation of such works, and offered, rather than any risk of injury should arise from the dismissal of the Mauluví, to maintain that officer at his own charge; if the Society would sanction his re-appointment.—The Secretary was directed to explain to Mr. Torrens that while the Council of

the Society fully appreciate the advantage of retaining on their establishment a Muhammedan scholar, in the appointment of the late Mauluví, they felt that the financial position of the Society rendered his removal, for the present at least, a measure of necessity. At the same time the preservation of the Society's library was by no means neglected, being entrusted to the Society's librarian, Bábu Rájendralál Mittra.

A valuable paper by B. H. Hodgson, Esq., on the Physical Geography of the Himalaya, accompanied by a map, was laid before the meeting; but as it is already printed in the number of the Society's Journal now nearly ready for issue, it was not deemed necessary to read it in extenso.

Read a short note by Henry Torrens, Esq., on Native Impression regarding the natural history of certain animals.

From Captain Newbold, forwarding a paper by Hekekyan Bey describing the strata bored through in searching for coal in Wádi Arába in the eastern desert of Egypt, with an introductory note by himself.—Ordered for publication in the Journal.

Several other communications of no public importance having been read

The Rev. Mr. Long brought to the notice of the meeting the loss the Society had sustained by the death of Dr. Hæberlin, who had been an active member for many years and proposed the following resolution, which was carried unanimously.

"Resolved,—That the Society desire to record the sense that they, as well as the cause of Sanskrit literature, have sustained by the death of Dr. Hæberlin."

The Secretary having brought to the recollection of the meeting the proposal of the Council in the recent Financial Report, that a Committee be appointed to pass the monthly accounts, it was

Resolved,—That a Finance Committee be appointed at the ensuing annual meeting, to audit the monthly accounts.

The Secretary laid before the meeting an Atlas and a skeleton map of the Chinese territories in Central Asia, drawn up from very recent Chinese authorities. These maps exhibit the topography of these countries in much detail, rendering it easy to trace the routes given in Von Humboldt's *Asie Centrale*, that of Mir Izzat Ulláh, Sekander

Beg, &c., as well as those of early European travellers and Chinese pilgrims.

The Zoological Curator and Librarian having read their monthly reports, the meeting adjourned.

LIBRARY.

The following books have been added to the Library since the last meeting.

Presented.

Chronicon Samaritanum, Arabice Conscriptum, cui titulus est Liber Josuae. Ex unico codice Scaligeri nunc primum edidit, Latine vertit, annotatione instruxit, et dissertationem de codice, de Chronico, et de quaestionibus, quae hoc libro illustrantur, praemisit Th. Guil. Joh. Juynboll. Lugduni Batavorum 1848, 4to.—PRESENTED BY THE CURATORES ACADEMIAE LUGDUNO BATAVAE.

The Dodo and its kindred ; or the history, affinities and osteology of the Dodo, Solitaire, and other extinct birds. By H. E. Strickland, Esq. and Dr. A. G. Melville. London 1848, 4to.—PRESENTED BY H. E. STRICKLAND, ESQ.

Les Seances de Haidari, recits Historiques et Eligiaques sur la Vie et la Mort des principaux Martyrs Musulmans, ouvrage traduit de l'Hindustani, par M. l'Abbe Bertrand; suivi de l'Elegie de Miskin, traduit de la meme langue, par M. Garcin de Tassy. Paris 1845, 8vo.—BY THE TRANSLATOR.

Memoires de la Societe Royale des Antiquaries du Nord, 1845-47.—BY THE SOCIETY.

Guide to Northern Archæology by the Royal Society of Northern Antiquaries of Copenhagen ; edited for the use of English readers by the Right Hon'ble the Earl of Ellesmere. London 1848, 8vo.—BY THE ROYAL SOCIETY OF NORTHERN ANTIQUARIES.

Bulletin de la Societe de Geographie. Troiseme Serie, Tome IX.—BY THE SOCIETY.

Journal of the Royal Geographical Society of London, Volume 18th, Part II.—BY THE SOCIETY.

The Calcutta Christian Observer, Sept. @ Dec. 1849.—BY THE EDITORS.

The Oriental Christian Spectator for July, Sept. and Nov. 1849,—BY THE EDITORS.

The Oriental Baptist, Nos. 33—6.—BY THE EDITOR.

Upadesáka, Nos. 33—6.—BY THE EDITOR.

The Journal of the Indian Archepelago, Vol. III. Nos. 6—9.—BY THE EDITOR.

Ditto Ditto (2 copies).—BY THE GOVERNMENT OF BENGAL.

The Languages of the Indian Archepelago. No. I. A system of Classification and Orthography for Comparative Vocabularies. By J. R. Logan, Esq. (Pamphlet).—BY THE AUTHOR.

A letter to K. of the Benares Magazine, touching novel opinions on Indian Logic; with strictures upon certain portions of the Lectures on the Nyáya Philosophy, printed for the use of the Benares College by order of Goverument N. W. P. Allahabad 1849, (4 copies).—BY THE AUTHOR.

Tattvabodhiní Patriká, Nos. 73—5.—BY THE TATTVABODHINI' SABHA'.

Meteorological Register kept at the Surveyor General's Office, Calcutta, for the month of July, Augt. Sept. and Oct. 1849.—BY THE DEPUTY SURVEYOR GENERAL.

Denkschriften der Koniglichen Akademie der Wissenschaften zu Munchen, Vols. I. II. III. IV. VI. VII. IX. (2 copies)—PRESENTED BY THE ROYAL ACADEMY OF MUNICH.

Abhandlungen der Akademie der Wissenschaften, part II. of Vols. XIX. XX. XXI.—BY THE SAME.

Bullietin der Akademie der Wissenschaften fur das Jahr 1843-4-5-6.—BY THE SAME.

Gelehrte Anzeigen, Bands XXII. XXIII.—BY THE SAME.

Almanach der koniglichen bayerischen Academie der Wissenschaften fur das Jahr 1847.—BY THE SAME.

Systema Materiae Medicae Vegetabilis Brasiliensis composuit. Car. F. P. de Martius, Lipsiae, 1843.—BY THE AUTHOR.

Súsrutas Áyurvedas. Id est Medicinae systema a Venerabili D'hanvantari demonstratum a Susruta discipulo compositum. Nunc primum ex Sanskrita in Latinum sermonem vertit, introductionem, annotationes et rerum indicem adjecit Dr. F. Hessler.—BY THE AUTHOR.

Die Ueberbleibsel der altagypteschen Menschenrace. By Dr. Fransz Pruner.—BY THE AUTHOR.

Uber das studium der Griechischen und Romischen Alterthumer. By Ernest von Lasaula.—BY THE AUTHOR.

Bhagavat Purána, traduit et publie par E. Burnouf, 2 vols. fol.—BY THE EDITOR.

Ueber die Ordalien bei der Germanen in ihrem Zusammenhange mit der Religion. By G. Phillips.—BY THE AUTHOR.

Die Galvanographie, eine Methode, gemalti Zuschbilder durch galvanische Kupferplatter im Drucke zu vervielfaltigen von Fransz von Robell.—BY THE AUTHOR.

Transactions of the Bombay Geographical Society from 1837 to 1848, 6 volumes, 8vo.—BY THE SOCIETY.

Journal of the Ceylon branch of the Royal Asiatic Society for 1848.—BY THE SOCIETY.

Journal of the American Oriental Society No. IV.—BY THE SOCIETY.

Journal of the Bombay branch of the Royal Asiatic Society, No. 12.—

Memoirs of the American Academy of Arts and Sciences, Vol. III. (2 copies).—BY THE ACADEMY.

An account of the Measurement of Two Sections of the Meridional Arc of India, by Lieut.-Colonel Everest.—BY THE GOVERNMENT OF INDIA.

Transactions of the American Ethnological Society, Vols. I. II.—BY THE SOCIETY.

The Whole Works of the most Rev. James Usher, D. D. Vol. XVI.—PRESENTED BY THE PROVOST AND SENIOR FELLOWS OF TRINITY COLLEGE, DUBLIN.

Hekâët Abdullah bin Abdul Káder, (in Javanese), Singapur 1849, 4to.—BY THE GOVERNMENT OF BENGAL.

The Vájasaneyi-Sanhita of the Mádhyandina and the Kánva Sakhas with the Commentary of Mahidhara. Edited by Dr. Albrecht Weber, Berlin 1849, 4to.—BY THE EDITOR.

History of the Sikhs, by Capt. J. D. Cunningham.—BY THE AUTHOR.

An Analytical Digest of all the Reported Cases decided in the Supreme Courts of Judicature in India. By W. H. Morley, Esq. Part 5 of Vols. III. —BY THE GOVT. OF BENGAL.

Yesu Christa muhatmya, in Sanskrita and Bengali.—BY THE REV. J. LONG.

Memoir on the Statistics of the North-Western Provinces. By A. Shakespear, Esq.—BY THE GOVT. OF THE N. W. PROVINCES.

On Foraminifera, their organization, and their existence in a fossilized state in Arabia, Sinde, Kutch, and Khattywar. By J. Carter, Esq. C. S.—By the Author.

The Holy Bible, London 1619, 4to.—By J. P. Parker, Esq.

Zakarija bin Mohammad bin Mahmud el Cazwini's Kosmographie. Erster Theil. Die Wunder der Schopfung: edited by Dr. Austenfield, Gottingen 1838, 8vo.—By the Editor.

Zeitschrift der Deutschen morgenlandischen Gesellschaft, herausgegeben von den Geschaftsfuhrern. Zweiter Band, IV. heft, and Dritter Band, I heft. —By the Editors.

Exchanged.

Journal Asiatique, Nos. 59, 60.

The London, Edinburgh and Dublin Philosophical Magazine, Nos. 225—30.

Jameson's Journal, Nos. 91, 92.

Athenæum, Nos. 1126-38-40.

Purchased.

The Apostolical Constitutions, or Canons of the Apostles in Coptic. With an English Translation by H. Tottam, L. L. D. London 1848, Rl. 8vo.

Comptes Rendus, Nos. 18—21. Tome XXVII. and Nos. 1—5, Tome XXVIII.

The Annals and Magazine of Natural History for June, July, Augt. and Sept. 1849.

Journal des Savants for May, June and July, 1849.

North British Review, No. 22.

Museum of Curiosities.

Eight reed Arrows tipped with iron; from Birbhum.—Presented by G. H. J. Taylor, Esq.

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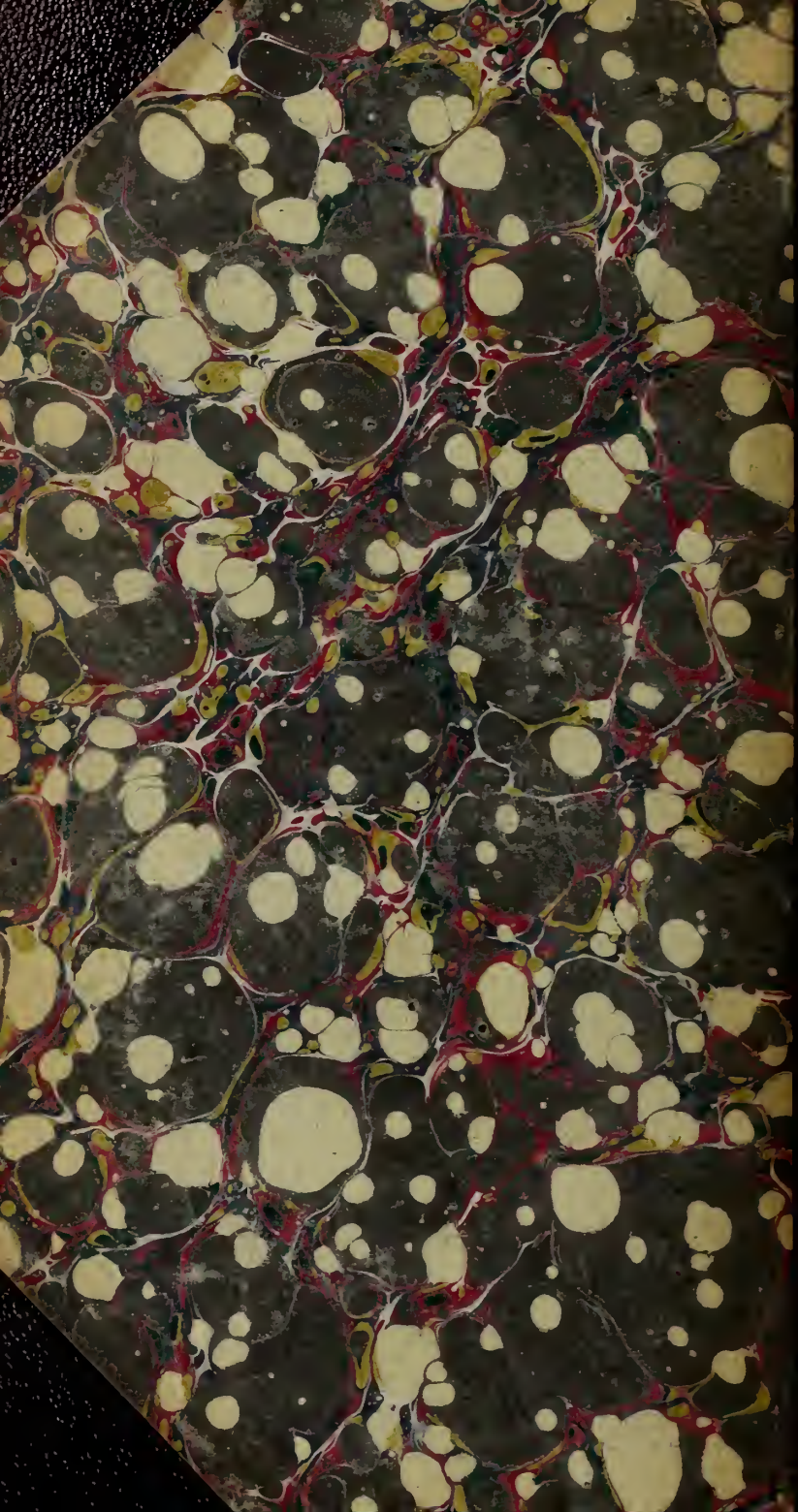
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